



## Repair Manual

- Golf Variant 2007 ➤
- Golf Variant 2010 ➤
- Jetta 2005 ➤

## Maintenance Procedures

Edition 07.2013





## List of Workshop Manual Repair Groups

### Repair Group

03 - Maintenance, Diagnosis

Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.





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## 03 – Maintenance, Diagnosis

### 1 General Information

(Edition 07.2013)

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- ⇒ [“1.2 Tow Starting and Towing”, page 6](#)
- ⇒ [“1.3 Lifting Vehicle On a Hoist or Workshop Hoist”, page 10](#)
- ⇒ [“1.4 Labels”, page 11](#)
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#### 1.1 Engine Overview

Gasoline and diesel engines are listed separately.

The engine codes are listed alphabetically.

- ◆ Gasoline engines ⇒ [page 1](#)
- ◆ Diesel engines ⇒ [page 4](#)
- ◆ Gasoline/hybrid engine ⇒ [page 3](#)

#### Gasoline Engines

Engine code Refer to ⇒ <a href="#">“1.10 Engine Code and Engine Identification”, page 21</a>	CBFA	CBPA
<b>Displacement specified in liter</b>	<b>2.0</b>	<b>2.0</b>
No. of cylinders	4	4
Valves per cylinder	4	2
Output/ kW /rpm	147/5100 to 6000	85/5200
Torque/Nm at rpm	280/1700 to 5000	170/2600
Compression ratio	10.3	10.3
Fuel injection/Ignition	Motronic MED 17.1 TSI Turbocharger	MPI Bosch Motronic
RON unleaded, minimum	95 also 91 ROZ, but with reduced performance	91 also 87 ROZ, but with reduced performance
Camshaft drive	Timing chain	Toothed belt





Engine code Refer to ⇒ "1.10 Engine Code and Engine Identification", page 21 .	CBTA	CBUA
<b>Displacement specified in liter</b>	<b>2.5</b>	<b>2.5</b>
No. of cylinders	5	5
Valves per cylinder	4	4
Output/kW/rpm	125/5700	125/5700
Torque/Nm at rpm	240/4250	240/4250
Compression ratio	9.5	9.5
Fuel injection/Ignition	MPI Bosch Motronic SRE	MPI Bosch Motronic SRE
RON unleaded, minimum	91 also 87 ROZ, but with reduced performance	91 also 87 ROZ, but with reduced performance
Camshaft drive	Timing chain	Timing chain

1) Information not available at the time of printing

### Gasoline Engines

Engine code Refer to ⇒ "1.10 Engine Code and Engine Identification", page 21 .	CCTA
<b>Displacement specified in liter</b>	<b>2.0</b>
No. of cylinders	4
Valves per cylinder	4
Output/kW/rpm	147/5100 to 6000
Torque/Nm at rpm	280/1700 to 5000
Compression ratio	10.2
Fuel injection/Ignition	Motronic MED 17.5 TSI Turbocharger
RON unleaded, minimum	95 also 91 ROZ, but with reduced performance
Camshaft drive	Timing chain

### Gasoline Engines

Engine code Refer to ⇒ "1.10 Engine Code and Engine Identification", page 21 .	CPKA
<b>Displacement specified in liter</b>	<b>1.8</b>
No. of cylinders	4
Valves per cylinder	4
Output/kW/rpm	125/4800
Torque/Nm at rpm	250/1500 to 4750
Compression ratio	9.6





Engine code Refer to ⇒ <a href="#">"1.10 Engine Code and Engine Identification", page 21</a>	CPKA
Displacement specified in liter	1.8
Fuel injection/Ignition	Motronic MED 17.5 TSI Turbocharger
RON unleaded, minimum	95
ROZ Ethanol 85	---
Camshaft drive	Timing chain

2) Information not available at the time of printing

Engine code Refer to ⇒ <a href="#">"1.10 Engine Code and Engine Identification", page 21</a>	CPLA	CPPA	CPRA
Displacement specified in liter	2.0	2.0	1.8
No. of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW/rpm	155/5300	155/5300	125/4800
Torque/Nm at rpm	280/1700 to 5200	280/1700 to 5200	250/1500 to 4750
Compression ratio	9.6	9.6	9.6
Fuel injection/Ignition	Motronic MED 17.5 TSI Turbocharger	Motronic MED 17.5 TSI Turbocharger	Motronic MED 17.5 TSI Turbocharger
RON unleaded, minimum	95	95	95
ROZ Ethanol 85	---	---	---
Camshaft drive	Timing chain	Timing chain	Timing chain

#### Gasoline/Hybrid engine

Engine code Refer to ⇒ <a href="#">"1.10 Engine Code and Engine Identification", page 21</a>	CNLA
Displacement specified in liter	1.4
No. of cylinders	4
Valves per cylinder	4
Output/kW/rpm	110/5000
Torque/Nm at rpm	250/1400 to 3500
Compression ratio	10.5
Fuel injection/Ignition	Motronic MED 17.1.21 TSI turbocharger
RON unleaded, minimum	95
ROZ Ethanol 85	--- Refer to <sup>3)</sup> .
Camshaft drive	Toothed belt

3) Information not available at the time of printing





## Diesel Engines

Engine code Refer to ⇒ "1.10 Engine Code and Engine Identification", page 21 .	CAYC	CBDA. Refer to <sup>4)</sup> .	CBDB. Refer to <sup>4)</sup> .
<b>Displacement specified in liter</b>	<b>1.6</b>	<b>2.0</b>	<b>2.0</b>
No. of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW/rpm	77/4400	100/4200	103/4200
Torque/Nm at rpm	250/1500 to 2500	320/1750 to 2500	320/1750 to 2500
Compression ratio	16.5	18.5	18.5
Fuel injection/Ignition	TDI Common Rail	TDI Common Rail	TDI Common Rail
Fuel per	DIN EN 590	DIN EN 590	DIN EN 590
Diesel particulate filter	no (EU3) / yes (EU5) <sup>5)</sup>	yes. Refer to <sup>5)</sup> .	yes. Refer to <sup>5)</sup> .
Camshaft drive	Toothed belt	Toothed belt	Toothed belt

4) May not be driven with RME biodiesel fuel.

5) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.



### Note

*Vehicles retrofitted with a diesel particulate filter are assigned in the table to diesel engines without diesel particulate filter. A vehicle with a factory-installed diesel particulate filter can be recognized by PR No. 7GG on the vehicle data label.*

Engine code Refer to ⇒ "1.10 Engine Code and Engine Identification", page 21 .	CBEA <sup>6)</sup>
<b>Displacement specified in liter</b>	<b>2.0</b>
No. of cylinders	4
Valves per cylinder	4
Output/kW/rpm	103/4000
Torque/Nm at rpm	320/1750 to 2500
Compression ratio	18.5
Fuel injection/Ignition	TDI Common Rail
Fuel per	DIN EN 590
Diesel particulate filter	yes. Refer to <sup>7)</sup> .
Camshaft drive	Toothed belt

6) May not be driven with RME biodiesel fuel.

7) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.





# Note

*Vehicles retrofitted with a diesel particulate filter are assigned in the table to diesel engines without diesel particulate filter. A vehicle with a factory-installed diesel particulate filter can be recognized by PR No. 7GG on the vehicle data label.*

Engine code Refer to ⇒ <b>“1.10 Engine Code and Engine Identification”</b> , page 21 .	CJAA
<b>Displacement specified in liter</b>	<b>2.0</b>
No. of cylinders	4
Valves per cylinder	4
Output/kW/rpm	103/4000
Torque/Nm at rpm	320/1750 to 2500
Compression ratio	16.5
Fuel injection/Ignition	TDI Common Rail
Fuel per	DIN EN 590
Diesel particulate filter	yes. Refer to <sup>8)</sup> .
Camshaft drive	Toothed belt

8) May not be driven with RME biodiesel fuel.

9) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.



# Note

*Vehicles retrofitted with a diesel particulate filter are assigned in the table to diesel engines without diesel particulate filter. A vehicle with a factory-installed diesel particulate filter can be recognized by PR No. 7GG on the vehicle data label.*





## 1.2 Tow Starting and Towing

⇒ "1.2.1 General Information", page 6

⇒ "1.2.2 Towing Eyes, Attaching, Jetta from MY 2005 and Golf Wagon from MY 2007", page 6

⇒ "1.2.3 Towing Eyes, Attaching, Golf Wagon from MY 2010 and Jetta from MY 2011", page 7

⇒ "1.2.4 General Information", page 9

### 1.2.1 General Information



#### Note

- ◆ Tow ropes or bars should be attached to the towing eyes only.
- ◆ The tow rope should be able to stretch to reduce the risk of damage to both vehicles. Therefore only ropes of synthetic material or rope from similarly flexible material should be used. However it is safer to use a tow bar!
- ◆ Avoid excessive towing effort and do not jerk. During towing operations on unpaved roads there is always a danger that the attachment points will be overstressed and damaged.
- ◆ The battery from another vehicle should be used for starting before trying to start an engine by towing.

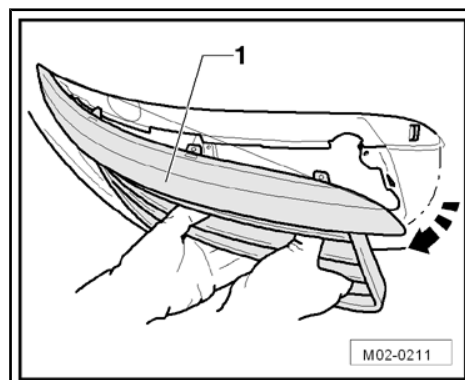
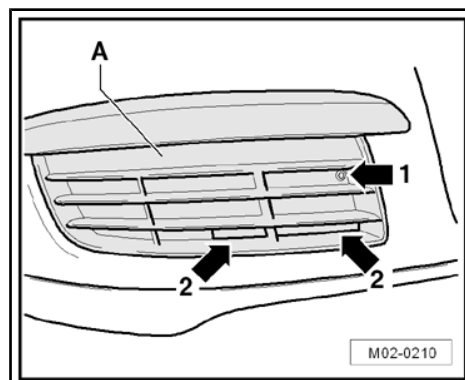
### 1.2.2 Towing Eyes, Attaching, Jetta from MY 2005 and Golf Wagon from MY 2007

The towing eye must be attached before towing the vehicle.

The towing eye is supplied with the vehicle tool kit.

#### Front Towing Eye:

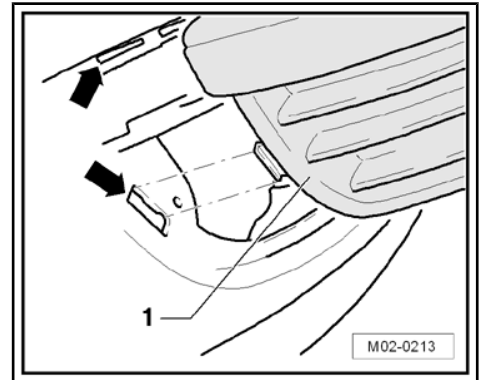
- Remove the screw -arrow 1- from the air grille -A-.
  - With both hands reach through the openings for the air grilles -arrows 2-.
- 
- Pull the air grille -1-, in the direction of the -arrow-, out of the mounting.







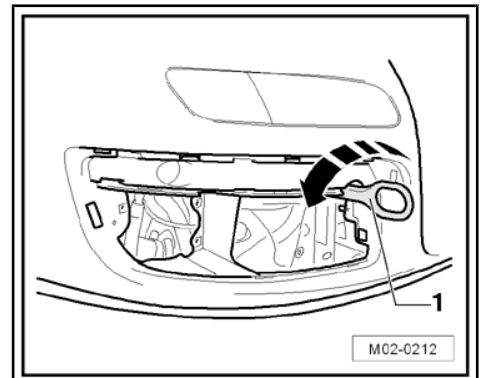
When removing the air grille -1-, be sure not to break off the tabs in the bumper -arrows-.



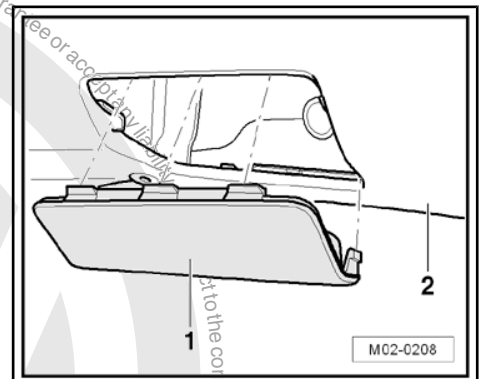
- Install towing eye in direction of -arrow- “left handed thread” as far as top and tighten securely with wheel wrench.
- After use, unscrew towing eye and store with vehicle tool kit. Re-install cover.

#### Rear Towing Eye:

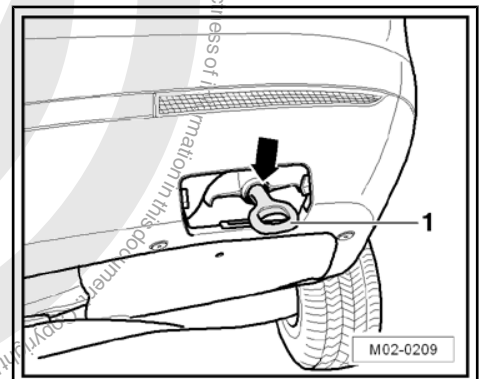
- The threaded hole for the towing eye is located on the right side, behind the bumper at the bottom.



- Remove the cover -1- in front of the threaded hole.



- Install the towing eye -1- until it stops “left handed thread” -arrow- and tighten it with a wrench.
- After use, unscrew towing eye and store with vehicle tool kit. Re-install cover.



### 1.2.3 Towing Eyes, Attaching, Golf Wagon from MY 2010 and Jetta from MY 2011

The towing eye must be attached before towing the vehicle.

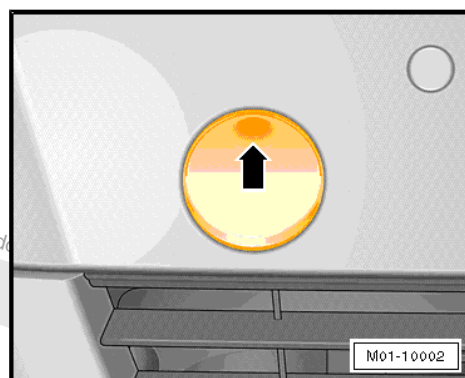
The towing eye is supplied with the vehicle tool kit.





### Front Towing Eye:

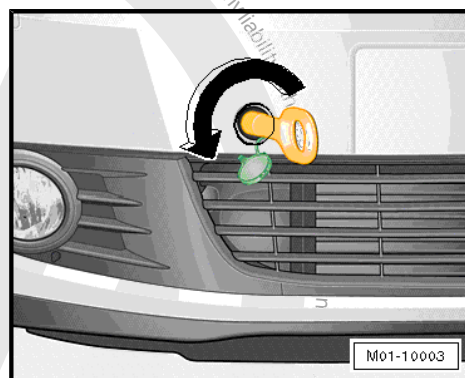
- The threaded hole for the towing eye is located on the right side, inside the bumper behind a cover.
- Press on the top of the cover -arrow- to release it.



- Install the towing eye until it stops ("left handed thread") -arrow- and tighten it with a wrench.

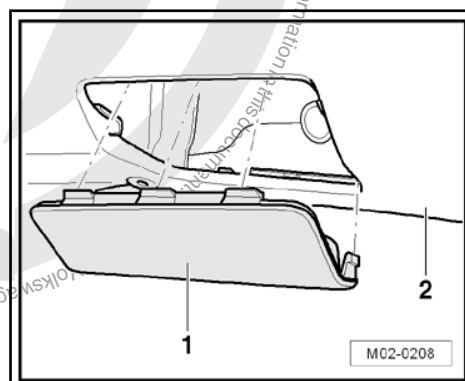
### Rear Towing Eye:

- The threaded hole for the towing eye is located on the right side, behind the bumper at the bottom.



### Only Golf Wagon from MY 2010:

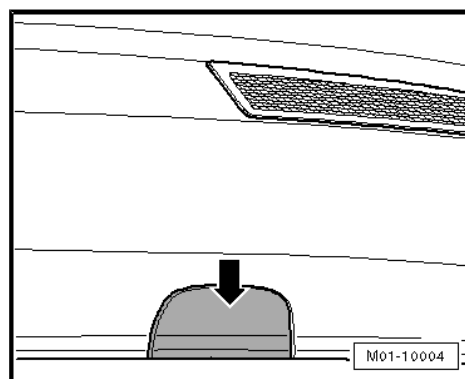
- Remove the cover -1- from the bumper cover -2-.



### Only Jetta from MY 2011:

- Slide the cover out toward the front -arrow-. More force may be needed to do this.

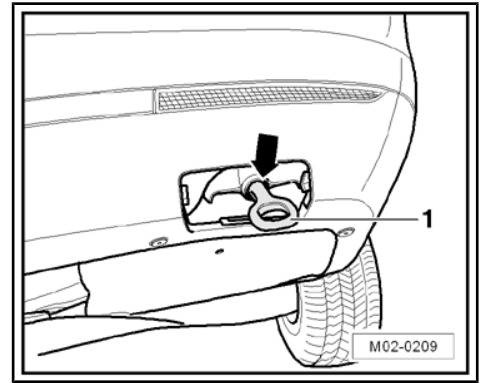
### Continuation all Vehicles:







- Install the towing eye -1- until it stops ("left handed thread") -arrow- and tighten it with a wrench.
- After use, unscrew towing eye and store with vehicle tool kit. Re-install cover.



## 1.2.4 General Information

- ◆ Legal regulations concerning towing must be observed.
- ◆ Both drivers must be familiar with towing procedures. Inexperienced drivers should not attempt to tow start or tow.
- ◆ When using a tow rope the driver of the towing vehicle must engage the clutch very gently when moving off and changing gear.
- ◆ The driver of the vehicle being towed must ensure that the tow rope is always taut.
- ◆ Both vehicles must have the emergency flasher switched on if necessary observe country specific regulations.
- ◆ The ignition must be switched on, so that the steering wheel is not locked and the turn signals, horn, windshield wipers, and windshield washer system can be operated.
- ◆ Because the brake booster only works when the engine is running (in vehicles without ABS), considerably more pressure is required on the brake pedal when the engine is not running.
- ◆ In vehicles with Power Assisted Steering (PAS), more force must be used to steer when engine is not running.
- ◆ Without lubricants in the manual transmission and/or automatic transmissions the car may only be towed with raised drive wheels.
- ◆ For vehicles with catalytic converter, the engine with catalytic converter at operating temperature must not be tow started over a long distance, otherwise unburned fuel reaches the catalytic converter and can be burned there. This may cause the catalytic converter to overheat.

### Notes for Vehicles with Manual Transmissions:

- Before moving off, depress clutch pedal and hold then engage 2nd or 3rd gear.
- Switch on the ignition.
- When both vehicles are in motion, release the clutch pedal.
- As soon as engine starts, depress clutch and shift into neutral to avoid running into the towing vehicle.

### Notes for Vehicles with Automatic Transmissions:



#### Note

*Tow starting of vehicles with automatic transmission is not possible for technical reasons.*





- ◆ Selector lever in "N".
- ◆ Do not tow at speeds greater than 30 mph (50 km/h).
- ◆ The maximum towing distance is 30 miles (50 km).
- ◆ For longer distances, the front end of the vehicle must be raised.

Reason: The transmission fluid pump does not work when the engine is switched off. That means the transmission is not sufficiently lubricated at higher speeds and longer distances.

When towing with a tow truck, the vehicle may only be towed with raised front wheels.

Reason: With car raised in the back, the driveshafts turn backwards. This would cause the planetary gears in the automatic transmission to achieve such high RPM that the transmission would be heavily damaged within a very short time.

#### Notes for Vehicles with AWD:

- ◆ Vehicle can be towed like a two-wheel drive vehicle.
- ◆ The vehicle can be towed with a tow truck with the front or rear axle raised.

If vehicle must be towed with rear axle raised and rear wheels cannot move freely, make sure that the free movement of the rear axle has not been bypassed beforehand by backwards driving. To undo the bypass, shift into 1. gear briefly with ignition switched on and again into idle.

### 1.3 Lifting Vehicle On a Hoist or Workshop Hoist

⇒ **"1.3.1 Safety Precautions", page 10**

⇒ **"1.3.2 Hoist and Jack Mounting Points", page 11**

#### 1.3.1 Safety Precautions



##### WARNING

- ◆ *Before driving the vehicle onto a workshop hoist, make sure there is enough clearance between any low-lying components and the hoist.*
- ◆ *Before driving a vehicle onto a lifting platform it must be ensured that the vehicle weight does not exceed the permissible lifting capacity of the platform.*
- ◆ *Vehicle may only be lifted at points indicated in illustration in order to avoid damaging vehicle floor pan and to prevent vehicle from tipping.*
- ◆ *Never start engine and engage a gear with vehicle lifted so long as even one wheel has contact with the floor! There is a risk of an accident if this is not observed!*
- ◆ *If work is to be performed under vehicle it must be supported by suitable stands.*





### 1.3.2 Hoist and Jack Mounting Points

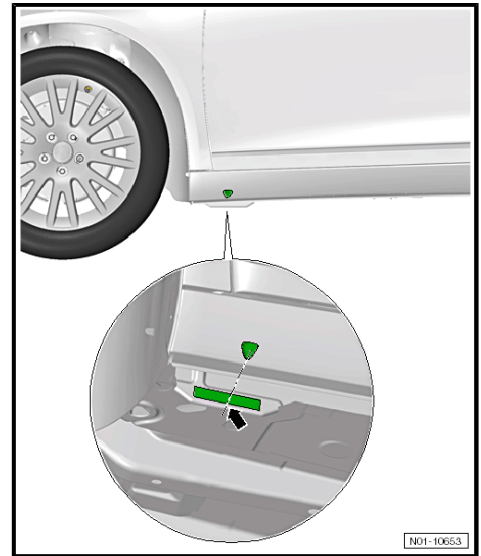
#### Front

- Position the support plate in the area of the side member marking on vertical stiffener of floor plate -arrow-.



#### WARNING

*Make sure that side member stiffener contacts support plate of lifting platform at center.*



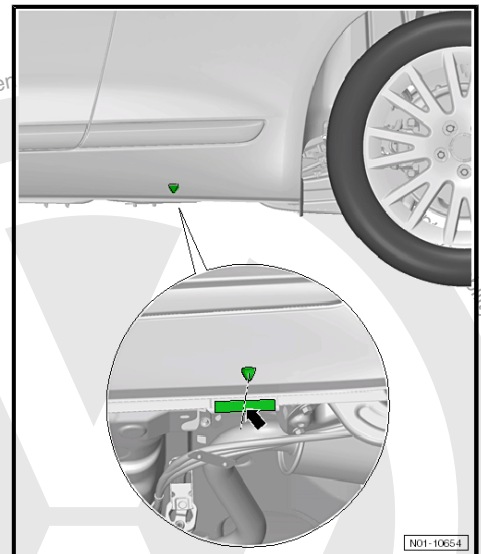
#### Rear

- Position the support plate in the area of the side member marking on vertical stiffener of floor plate -arrow-.



#### WARNING

*Make sure that side member stiffener contacts support plate of lifting platform at center.*



### 1.4 Labels

⇒ [“1.4.1 First Service Label, Applying at Delivery Inspection”, page 11](#)

⇒ [“1.4.2 Next Service Label, Applying”, page 12](#)

⇒ [“1.4.3 Vehicle Data Label, Applying in Customer Maintenance Booklet”, page 13](#)

⇒ [“1.4.4 High Voltage Warning Label”, page 13](#)

#### 1.4.1 “First Service” Label, Applying at Delivery Inspection

The “Next Service” label applies to vehicles through MY 2013. For vehicles from MY 2014 the label is discontinued.





Label "Your First Service - Oil Change" on vehicles with PR numbers "QG0/QG2".

**Ihr erster Service**

**Ölwechsel-Service**  
spätestens nach  
15.000 km **oder** 1 Jahr\*  
\*je nachdem, was zuerst eintritt

**Bremsflüssigkeits-Wechsel**  
erster nach 3 Jahren,  
danach alle 2 Jahre  
Volkswagen empfiehlt VW 501 14

222.553.QG02.00

N01-10656

Label "Your First Service - Interval Service" on vehicles with PR numbers "QG0/QG2".

**Ihr erster Service**

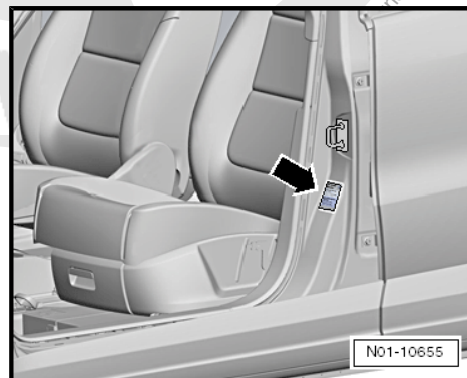
**Intervall-Service**  
nach flexibler  
Service-Intervall-Anzeige  
(spätestens nach 2 Jahren)

**Bremsflüssigkeits-Wechsel**  
erster nach 3 Jahren,  
danach alle 2 Jahre  
Volkswagen empfiehlt VW 501 14

241.553.QG01.00

N01-10657

- Apply the label to the B-pillar -arrow- on the driver side. The label is located on an instruction sheet, which is attached to the front of the vehicle literature. Destroy the instruction after applying the label.



## 1.4.2 "Next Service" Label, Applying

Label through 10/26/2009

- "Next service appointment" sticker: Check off an oil change service or an inspection service (next service due) and enter the date and the odometer reading.

**Ihre nächsten Service-Termine**

☐ Nach Service-Intervall-Anzeige  
**oder**

☐ Monat ..... Jahr\* .....  
bei ..... km\*

☐ **Zusatzumfänge**  
Monat ..... Jahr\* .....  
bei ..... km\*

\*Je nachdem, was zuerst eintritt

☐ **Bremsflüssigkeits-Wechsel**  
Monat ..... Jahr\* .....  
bei ..... km\*

Volkswagen empfiehlt VW 501 14

473.572.00.00

N01-10658





Label from 06/21/2009 through MY 2013.

- “Next service appointment” sticker: Check off the oil change service or Inspection service or the legally required test, for example, inspecting the gas system, (whichever one is due next) and enter the date and mileage (kilometers).



#### Note

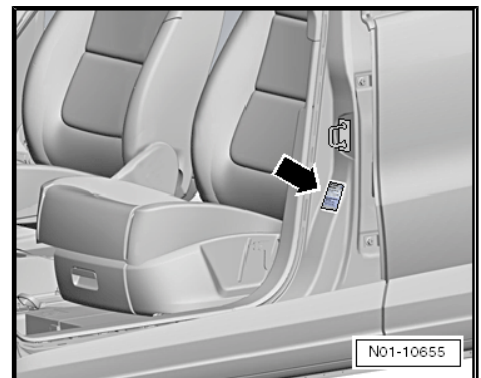
A new label was introduced in 11/02/2009.

Service intervals ➔ [“1.15 Service Tables”, page 29](#)

Ihre nächsten Service-Termine	
<input type="checkbox"/>	Nach Service-Intervall-Anzeige oder
<input type="checkbox"/>	Monat ..... Jahr* ..... bei ..... km*
<input type="checkbox"/>	<b>Zusatzumfänge</b>
	Monat ..... Jahr* ..... oder bei ..... km*
	*Je nachdem, was zuerst eintritt
<input type="checkbox"/>	<b>Gesetzliche Prüfung</b>
	Monat ..... Jahr* ..... <b>Bremsflüssigkeits-Service</b>
	Monat ..... Jahr* ..... Volkswagen empfiehlt VW 501 14

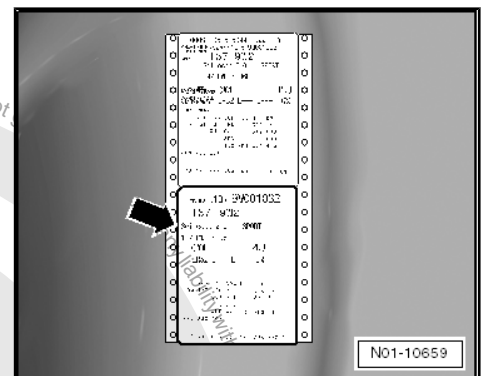
N01-10998

- Apply the label to the B-pillar on the driver side -arrow-.



### 1.4.3 “Vehicle Data” Label, Applying in Customer Maintenance Booklet

- Of the two vehicle data labels, apply the bottom one -arrow- in the customer Maintenance booklet.



### 1.4.4 High Voltage Warning Label

Warning label on high voltage components ➔ [page 14](#)

High voltage labels in engine compartment overview from the top ➔ [page 14](#)

High voltage labels in engine compartment overview from underneath ➔ [page 15](#)





## Warning Labels on High Voltage Components:



### Note

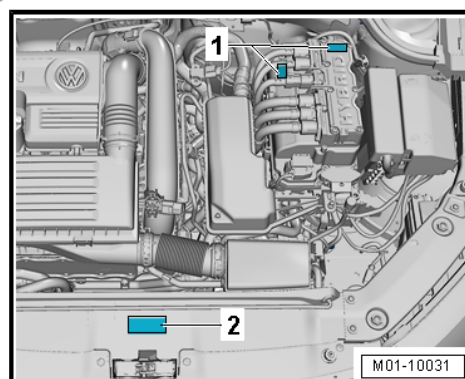
*If any high voltage warning labels are found to be missing from high voltage components during the visual inspection, they must be replaced!*

## Warning Labels on High Voltage Components:

### Warning Label on the Lock Carrier

### High Voltage Labels in Engine Compartment overview from the Top:

- Perform visual check.
- Check the condition of the warning label -1- on the Electric Drive Power and Control Electronics - JX1- .
- Check the condition of the warning label -2- on the lock carrier.

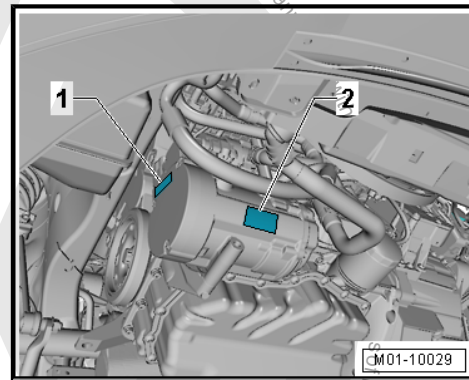






## High Voltage Labels in Engine Compartment Overview from Underneath:

- Remove the engine compartment cover (noise insulation) “bottom”. Refer to  
⇒ [“2.32 Lower Engine Compartment Cover, Removing and Installing”, page 120](#) .
- Perform visual check.
- Check the condition of the warning label -1- and -2- on the Electric A/C Compressor - V470- .
- Install the engine compartment cover (noise insulation) “bottom”. Refer to  
⇒ [“2.32 Lower Engine Compartment Cover, Removing and Installing”, page 120](#) .



## 1.5 Customer Maintenance Booklet Entries

If a part is being replaced earlier than what is recommended by the manufacturer, for example, the toothed belt, then the time period for the next change begins the time the part is replaced.

- For this reason it is very important to document inside the customer Maintenance booklet every time a part is replaced.
- This applies also to parts that are being replaced earlier than when they are scheduled to be replaced.



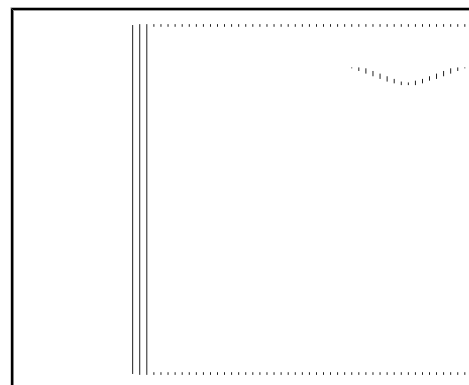
### Note

- ◆ When using an “Original Replacement Part Kit”, determine if it is necessary for technical reasons to use all the parts that come in the kit.
- ◆ If it is necessary to replace more parts than what is technically required, always inform the customer before performing the repair.

## 1.6 Vehicle Diagnostic Tester, Connecting

### Special tools and workshop equipment required

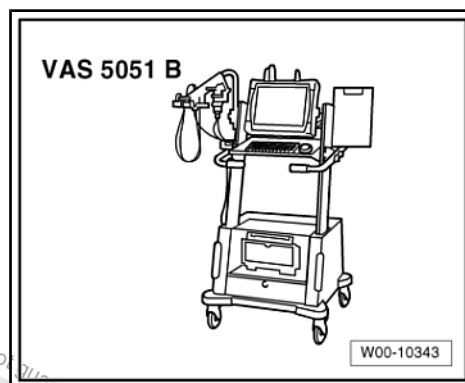
- ◆ Vehicle Diagnostic Tester





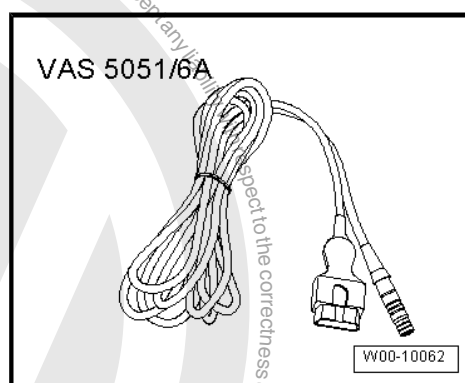


◆ Vehicle Diagnostic Tester

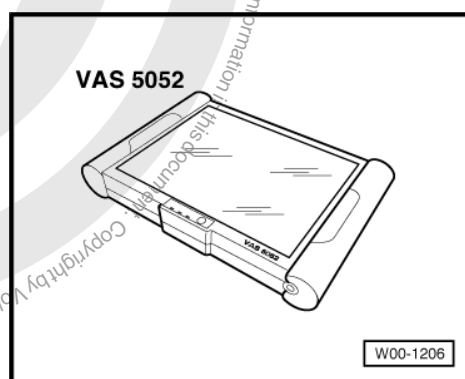


◆ Diagnostic Cable, 5 Meters - VAS 5051B/1-

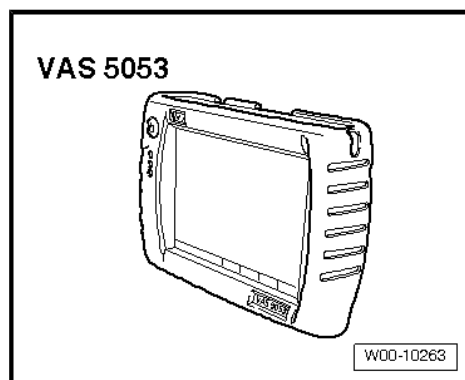
◆ Diagnostic Cable - VAS 5051/6A-



◆ Vehicle Diagnosis and Service Information System - VAS 5052- or newer models



◆ Vehicle Diagnostic Tester







◆ Diagnostic Cable - VAS 5052/3-

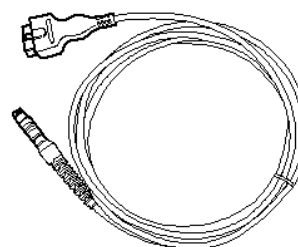
VAS 5052/3



W00-10260

◆ Diagnostic Cable For VAS 5052 (2 meter) - VAS 5052/3 A-

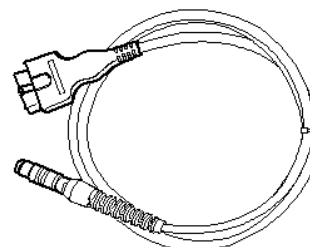
VAS 5052/3A



W00-11028

◆ Diagnostic Cable For VAS 5052 (5 meter) - VAS 5052/3 A1-

VAS 5052/3A1



W00-11029



Note

*Make sure the selected Vehicle Diagnostic Tester is only used with the accompanying diagnostic cable.*



WARNING

- ◆ *During a road test you must always secure testing and measuring equipment on the back seat.*
- ◆ *Drivers must NEVER operate these tools while driving.*





- Perform the following procedure:
- Connect the diagnostic cable connector to the diagnostic connection.
- Turn on the Vehicle Diagnostic Tester .
- Switch on the ignition.

Follow the instructions appearing on the screen to start the desired functions.



## 1.7 Vehicle Identification Number

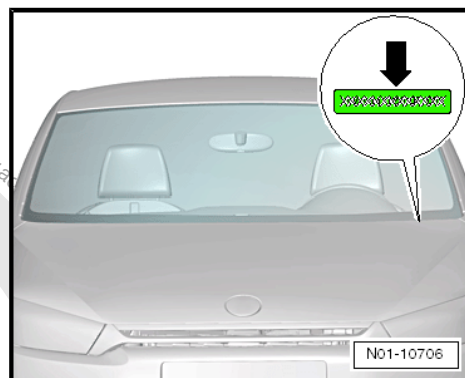
⇒ [“1.7.1 VIN on Lower Edge of Windshield”, page 18](#)

⇒ [“1.7.2 VIN on Longitudinal Member Extension”, page 18](#)

⇒ [“1.7.3 Decoding VINs”, page 19](#)

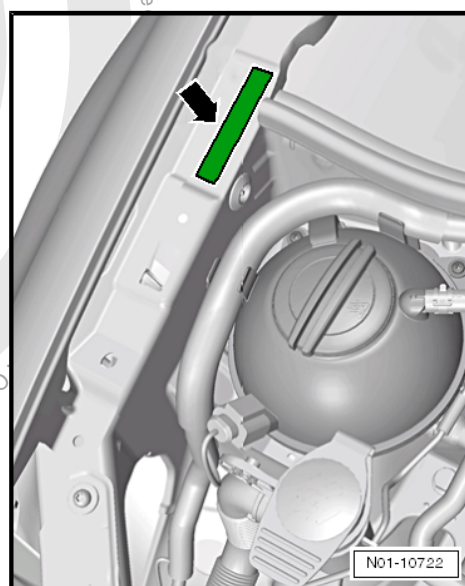
### 1.7.1 VIN on Lower Edge of Windshield

The VIN -arrow- is on the left side of the vehicle in the windshield, near the windshield wiper mount. It is visible from outside.



### 1.7.2 VIN on Longitudinal Member Extension

Vehicle Identification Number (VIN) is located on extension of longitudinal member -arrow-.





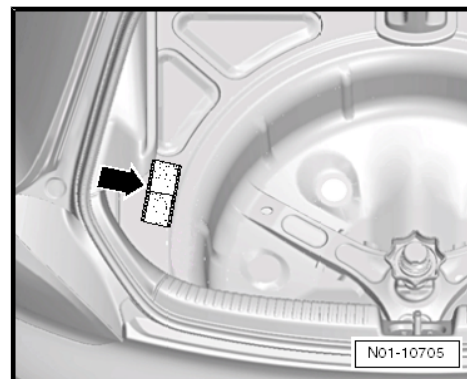


### 1.7.3 Decoding VINs

3VW	DG7	1K2 / 1K5	X	5	M	600015
Manufacturer code	Filler character	Type	Filler character	MY 2005	Producing Factory	Serial number

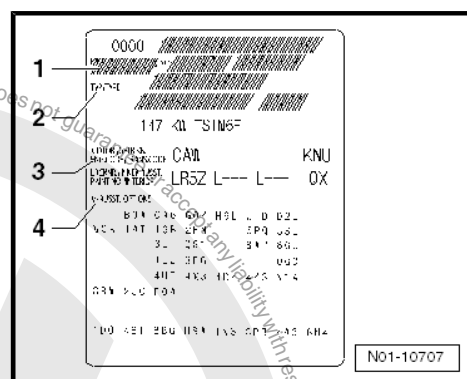
## 1.8 Vehicle Data Label

The vehicle data label -arrow- is located in the spare wheel well on the left side. The vehicle data label is also in the customer Maintenance booklet.

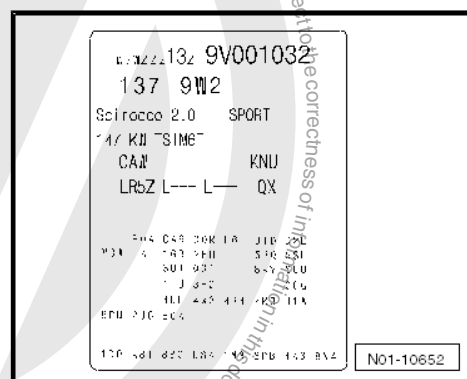


The label contains the following vehicle data:

- 1 - VIN
- 2 - Vehicle model, engine output, transmission
- 3 - Engine and transmission codes, paint code, interior equipment
- 4 - Optional equipment, PR numbers



The label inside the customer Maintenance booklet contains the same information. The legend is under the label.



## 1.9 Severe Operating Conditions

Under severe operating conditions, it is necessary to have some work performed before the next service is due or between specified Service Intervals.

### Severe Operating Conditions

- Constant short-distance driving or stop-and-go driving in the city
- High proportion of cold starts





- Operating the vehicle in areas with extremely low temperatures for an extended period of time
- Frequently left in idle for longer periods, for example, taxis
- Frequently driving full throttle or with a high load or a trailer
- Running with diesel fuel with high sulfur content
- Frequently operating in areas with excessive dust

#### Hot Climate Countries

Afghanistan	Egypt	Algeria
Angola	Equatorial. Guinea	Ethiopia
Australia	Bahrain (GCC)	Benin (Dahomey)
Botswana	Brunei	Burkina Faso (Upper Volta)
Burundi	China	Democratic Republic of Congo
Djibouti	Dubai (AGCC)	Ivory Coast
Eritrea	Gabon	Gambia
Ghana	Guinea	Guinea-Bissau
India	Indonesia / (Borneo)	Iraq
Iran	Israel	Japan
Yemen (AGCC)	Jordan	Cameroon
Qatar (AGCC)	Kenya	Congo
Kuwait (AGCC)	Lesotho	Lebanon
Liberia	Libya	Madagascar
Malawi	Malaysia	Mali
Morocco	Mauritania	Mauritius
Mexico	Mozambique	Namibia
Republic of Niger	Nigeria	Oman (AGCC)
Palestine	Puerto Rico	Rwanda
Zambia	Saudi Arabia (AGCC)	Senegal
Sierra Leone	Zimbabwe	Singapore
Somalia	South Africa	Sudan
Swaziland	Syria	Tanzania
Thailand	Togo	Chad
Tunisia	Turkey	Uganda
United States of America	United Arab Emirates / Abu Dhabi (AGCC)	West Sahara
Central African Republic		





## 1.10 Engine Code and Engine Identification



### Note

- ◆ From MY 2008, four-digit engine codes are used.
- ◆ The first three characters tell the engine structure. They are also stamped into the engine as before.
- ◆ The fourth digit describes the engine output and depends on the engine control module.
- ◆ Four-digit engine codes are on the type plate, the vehicle data label and the engine control module.
- ◆ Gasoline engines: ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 00 ; Specifications .
- ◆ Diesel engines: ⇒ Engine Mechanical, Fuel Injection and Glow Plug; Rep. Gr. 00 ; Specifications .
- ◆ on vehicle data label. Refer to  
⇒ ["1.8 Vehicle Data Label", page 19](#) .

## 1.11 Type Plate



### Note

Vehicles for some countries do not have a type plate.

The type plate -arrow- is visible at the bottom of the B-pillar when the left front door open.

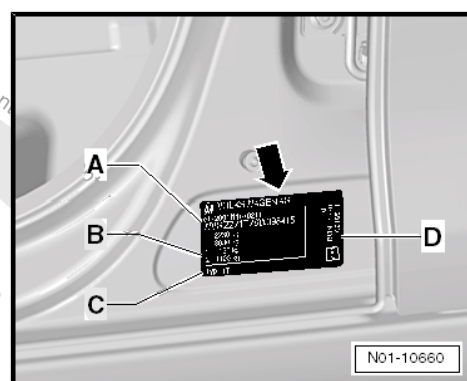
The type plate contains the following vehicle information:

A - VIN

B - Variable specifications, for example, axle loads, total permissible weights, permissible towing weights

C - Type number

D - Engine code



## 1.12 Countries with High Air Dust Levels

Afghanistan	Gabon	Libya	Sierra Leone
Egypt	Gambia	Macao	Zimbabwe
Algeria	Georgia	Madagascar	Singapore
Angola	Ghana	Malawi	Somalia
Equatorial Guinea	Greece	Malediven (India subcontinent)	Sri Lanka
Argentina	Guadeloupe	Mali	South Africa
Armenia	Guatemala	Morocco	Sudan
Azerbaijan	Guinea	Martinique	Suriname
Ethiopia	Guinea-Bissau	Mauritania	Swaziland
Australia	Guyana	Mauritius	Syria
Bahrain	Honduras	Mexico	Tadzhikistan
Bangladesh	Hong Kong	Mongolia	Tanzania
Barbados	India	Mozambique	Thailand





Belize	Indonesia	Myanmar (Burma)	Togo
Benin (Dahomey)	Iraq	Namibia	Chad
Bhutan	Iran	Nepal (India subcontinent)	Tunisia
Bolivia	Israel	Nicaragua	Turkey
Botswana	Yemen	Republic of Niger	Turkmenistan
Brazil	Jordan	Nigeria	Uganda
Brunei	California	North Korea	Uruguay
Burkina Faso (Upper Volta)	Cambodia	Oman	USA
Burundi	Cameroon	Pakistan	Uzbekistan
Chile	Kazakhstan	Palestine	Venezuela
Costa Rica	Qatar	Panama	United Arab Emirates / Abu Dhabi
Curacao	Kenya	Paraguay	Vietnam
Democratic Republic of the Congo	Kyrgyzstan Republic	Peru	White Russia (Belarus)
Djibouti	Columbia	Puerto Rico	West Sahara
Dominican Republic	Congo	Rest of Asia <sup>1)</sup>	Central African Republic
Dubai	Cuba	Réunion	China
Ecuador	Kuwait	Rwanda	Ukraine
El Salvador	Laos	Russian Federation	
Ivory Coast	Lesotho	Zambia	
Eritrea	Lebanon	Saudi Arabia	
French Guyana	Liberia	Senegal	

<sup>1)</sup> Fiji, Papua New Guinea, Solomon Islands, Tonga, Vanuatu

## 1.13 RME Biodiesel, Vehicles through 05.2006



### Note

*The ability to run on RME biodiesel is discontinued on vehicles from 06/2006.*

Only vehicles that are released by Volkswagen and are standard or optionally (PR No. 2G0) equipped for the use of RME biodiesel fuel are allowed to be driven with RME biodiesel fuel.



### Caution

- ◆ *If RME biodiesel is used although your vehicle is not designed for it, the fuel supply system may be damaged.*
- ◆ *When filling tank with biodiesel, only use ME fuel corresponding to EN 14214 (FAME).*
- ◆ *If using a biodiesel that differs from the standard, the fuel filter could become clogged.*

RME biodiesel must correspond to EN 14214 (FAME).

- ◆ RME means "rapeseed oil fatty acid-methyl-ester".





- ◆ EN means "Euro-Norm".
- ◆ FAME means "Fatty Acid Methyl Ester".

The RME biodiesel capability of a vehicle from the factory can be recognized by PR. No. 2G0 on vehicle data plate  
⇒ ["1.8 Vehicle Data Label", page 19](#).

#### RME biodiesel characteristics

- ◆ When operating with biodiesel, mileage could be minimally reduced.
- ◆ When operating with biodiesel, fuel consumption could be minimally increased.
- ◆ RME biodiesel can be used in the winter to approximately 14° F (-10°C).
- ◆ When outside temperatures are below 14° F (-10 °C), we recommend the use of winter diesel fuel.



#### Note

- ◆ *When operating with Biodiesel, observe the change in intervals for draining water and changing the fuel filter  
⇒ ["1.15 Service Tables", page 29](#).*
- ◆ *If the vehicle is planned to be parked for more than approximately 2 weeks, we recommend that beforehand the vehicle be filled with conventional diesel fuel and be driven a distance of approximately 30 miles (50 Km), to prevent damage to the injection system.*

## 1.14 Fixed Service

⇒ ["1.14.1 Service Identification", page 23](#)

⇒ ["1.14.2 Fixed Service", page 23](#)

⇒ ["1.14.3 Service Interval Display", page 25](#)

### 1.14.1 Service Identification

- See if the vehicle is equipped with the following PR numbers using the vehicle data label. Refer to  
⇒ ["1.8 Vehicle Data Label", page 19](#).

The PR number determines the service intervals. Refer to  
⇒ ["1.15 Service Tables", page 29](#).

#### Vehicle with the Following PR Number

Model year	PR Number	Service
Through MY 2012	QG0, QG2 and QG3	Fixed service
From MY 2013	QI1, QI2, QI3, QI4 and QI7	Fixed service

### 1.14.2 Fixed Service

Vehicles with fixed service are programmed with fixed service intervals. This means, these time and/or distance dependent service intervals are established by Volkswagen. Under ordinary operating conditions, this technically assures that the service will be performed when the interval is reached.

The service intervals therefore called fixed.

On vehicles,





- ◆ delivered without the service interval extension (PR numbers “QG0”, “QG2”, “QI1”, “QI2”, “QI3”, “QI4” and “QI7”).
- ◆ or where the maintenance interval extension was switched off
- ◆ or where LongLife engine oil is not used

have fixed Service.

The fixed service intervals apply to all maintenance services, which include an oil change.

#### **Vehicles with Production Control Number (PR Number) “QG0”**

The vehicles are “not” equipped at the factory with the components for flexible service. This maintenance has fixed service intervals.

#### **Vehicles with production control number “QG2”**

The PR number is only valid through MY 2012.

On these vehicles, the flexible service was not activated at the factory. This means the vehicles have a fixed service interval display and the maintenance service likewise has fixed intervals. Refer to ➔ [“1.14.3 Service Interval Display”, page 25](#) . These vehicles have the following components:

- ◆ Fixed service interval display in instrument cluster
- ◆ Engine oil level sensor
- ◆ Brake pad wear display, if equipped

#### **Vehicles with Production Control Number (PR Number) “QG3”**

The PR number is only valid through MY 2012.

On these vehicles, the flexible service was not activated at the factory. This means the vehicles have a fixed service interval display and the maintenance service likewise has fixed intervals. Refer to ➔ [“1.14.3 Service Interval Display”, page 25](#) . These vehicles have the following components:

- ◆ Fixed service interval display in instrument cluster
- ◆ Brake pad wear display, if equipped





### 1.14.3 Service Interval Display

Fixed service interval display (only vehicles with fixed service)  
⇒ [page 25](#) .

Service when due through MY 2013 ⇒ [page 25](#) .

Service when due from MY 2014 ⇒ [page 26](#) .

Advanced service warning through MY 2013 ⇒ [page 26](#) .

Advanced service warning from MY 2014 ⇒ [page 27](#) .

Use the rocker switch on the windshield wiper lever or the buttons in the multifunction steering wheel to check for service messages through MY 2013 ⇒ [page 28](#) .

Use the rocker switch on the windshield wiper lever or the buttons in the multifunction steering wheel to check for service messages from MY 2014 ⇒ [page 28](#) .

Using the buttons in the instrument cluster to check for service messages through MY 2013 ⇒ [page 29](#) .

Using the buttons in the instrument cluster to check for service messages from MY 2014 ⇒ [page 29](#) .

Service Interval Display, Resetting / Recoding. Refer to  
⇒ ["2.49 Service Interval Display, Resetting and Coding"](#),  
[page 177](#) .

#### Fixed Service Interval Display (only Vehicles with Fixed Service)

Calculating the maintenance intervals:

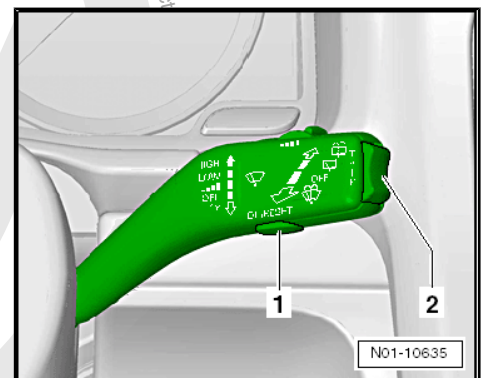
- ◆ The maintenance interval on vehicles with a fixed service is calculated in fixed service intervals. This means the kilometer- or time values were determined and programmed by Volkswagen.
- ◆ Under ordinary operating conditions, this technically assures that the service will be performed when the interval is reached.

#### Service when due through MY 2013.

- ◆ If the vehicle does not text display in the instrument cluster, then a gong will sound when the ignition is turned on to alert the driver that a service is due. The "wrench symbol" will also blink for a few seconds.
- ◆ If the vehicle has text display in the instrument cluster, the message will appear: "Service now".

The Service message will go out after a few seconds or when the engine is running.

- Press the multifunction indicator "OK" button -1- in the windshield wiper lever to switch back to the standard display.







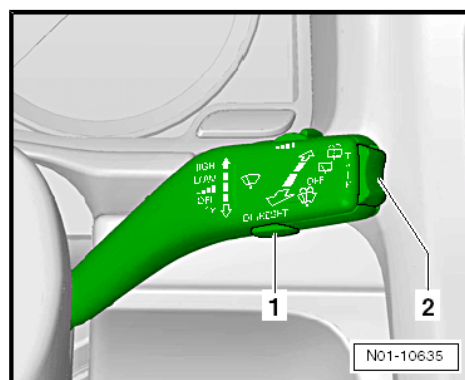
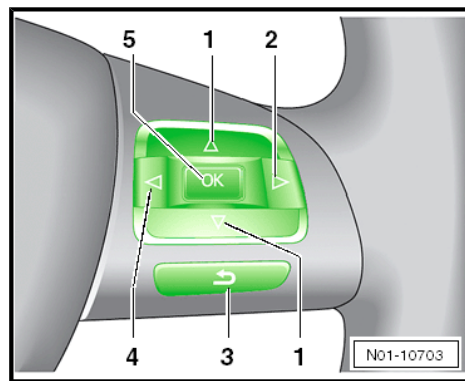
- You can also press the "OK" button -5- in the multifunction steering wheel to switch back to the standard display.

#### Service when due from MY 2014.

- ◆ If the vehicle does not text display in the instrument cluster, then a gong will sound when the ignition is turned on to alert the driver that a service is due. The "wrench symbol" will also blink for a few seconds, and the number "1" for oil change service or "2" for the inspection service will show in the upper right in the instrument cluster display.
- ◆ If the vehicle has text display in the instrument cluster, the following message will appear: "oil change now" or "inspection service now".

The Service message will go out after a few seconds or when the engine is running.

- It is also possible to press the "OK button" -1- for the multi-function indicator in the windshield wiper lever.



- or by pressing in the multifunction steering wheel the button "OK" -5- to switch back to the standard display.

#### Advanced Service Warning through MY 2013.

A "service advance warning" appears in the display when the ignition is switched on when an upcoming Service is due.

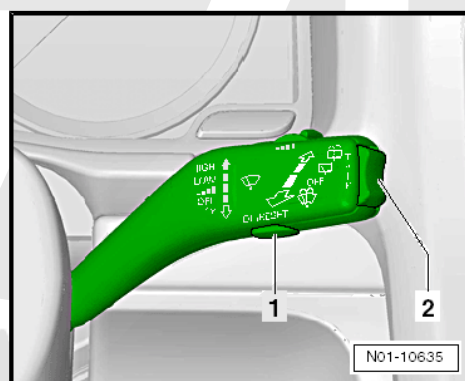
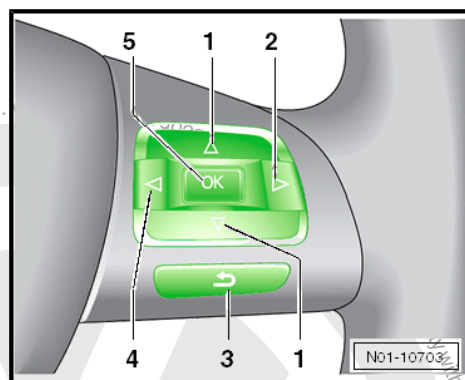
- ◆ If the vehicle does not have text display: The "wrench" symbol along with the number of "km" remaining until the next Service is due appear in the instrument cluster.

The display changes after approximately 10 seconds. The "clock" symbol and the number of days remaining until the next Service is due appear.

- ◆ If the vehicle has text display, "Service in -- km oder --- days" appears.

The Service message will go out after a few seconds or when the engine is running.

- Press the multifunction indicator "OK" button -1- in the windshield wiper lever to switch back to the standard display.







- You can also press the “OK” button -5- in the multifunction steering wheel to switch back to the standard display.
- ◆ The service advance warning appear for the first time 20 days before the Service due date.
- ◆ The remaining distance is rounded to the 100 km and the remaining time to whole days.

#### Advanced Service Warning from MY 2014.

A “service advance warning” appears in the display when the ignition is switched on when an upcoming Service is due.

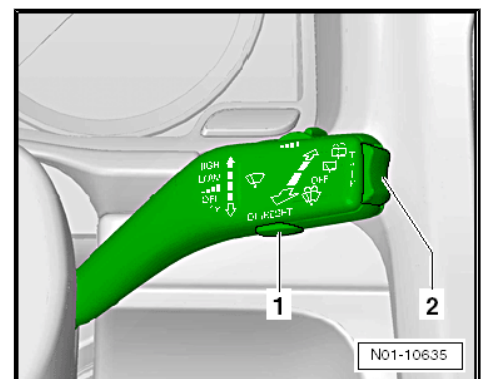
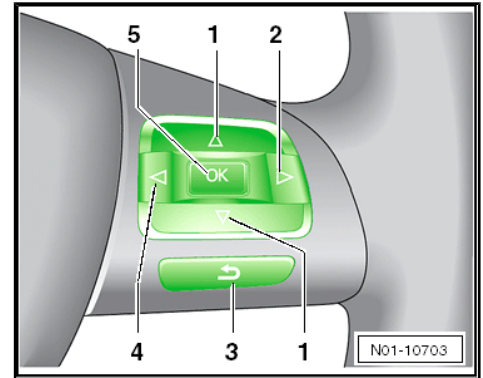
- ◆ If the vehicle does not have text display a “wrench symbol” along with the number of “km” remaining until the next service is due appear in the instrument cluster and the “clock symbol” and the number of days until the next service.
- ◆ The number “1” for oil change service or “2” for the inspection service will show in the upper right in the instrument cluster display.

If the advanced service warning for both services is displayed (“1” for oil change service or “2” for inspection service), if the vehicle does not have text display the instrument cluster the kilometer display and the display of days apply to the next service date.

- ◆ If the vehicle has text display in the instrument cluster, the following message will appear: “Oil change in --- km or days” or “Inspection in -- km or days”.

The Service message will go out after a few seconds or when the engine is running.

- It is also possible to press the “OK button” for the multifunction indicator in the windshield wiper lever -1-.







- or by pressing in the multifunction steering wheel the button “OK” -5- to switch back to the standard display.
- ◆ The service advance warning appear for the first time 20 days before the Service due date.
- ◆ The remaining distance is rounded to the 100 km and the remaining time to whole days.

**Use the rocker switch on the windshield wiper lever or the buttons in the multifunction steering wheel to check for service messages through MY 2013.**



#### Note

- ◆ *The actual service message can be accessed only after the vehicle has been driven 500 km since the last service.*
- ◆ *Until then only dashes appear in the display.*

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Select the “settings” menu using either the rocker switch on the windshield wiper lever or the buttons on the multifunction steering.
- Go the “Service” submenu, select “Info” and then press the “OK” button on the windshield wiper lever or in the multifunction steering wheel.
- ◆ If a Service is overdue, a minus sign will appear in front the kilometer or day on vehicles without text display.
- ◆ The following appears when a Service is overdue on vehicles with text display: “Service since --- km or --- days”

**Use the Rocker Switch on the Windshield Wiper Lever or the Buttons in the Multifunction Steering Wheel to Check for Service Messages from MY 2014.**

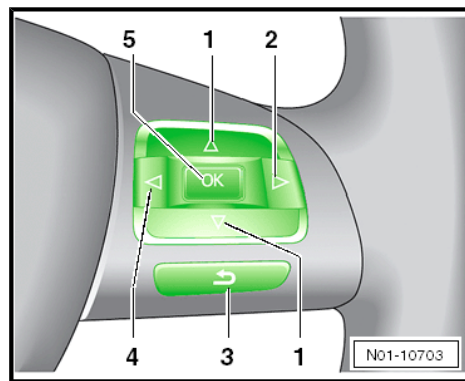


#### Note

- ◆ *The actual service message can be accessed only after the vehicle has been driven 500 km since the last service.*
- ◆ *Until then only dashes appear in the display.*

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Select the “settings” menu using either the rocker switch on the windshield wiper lever or the buttons on the multifunction steering.
- Go the “Service” submenu, select “Info”.
- Press the “OK button” either in the windshield wiper lever or in the multifunction steering wheel.
- ◆ If the vehicle does not have text display a “wrench symbol” and the number “1” for oil change service will show in the upper right in the instrument cluster display.
- Press the “OK button” either in the windshield wiper lever or in the multifunction steering wheel again.
- ◆ In the display a “wrench symbol”, and the number “2” for Inspection service will show in the upper right in the instrument cluster display.







An overdue service is represented by a minus sign in front of the Kilometer- or Day counter.

- ◆ The following appears when a Service is overdue on vehicles with text display: "Oil change in --- km or days" or "Inspection in -- km or days".

#### Using the Buttons in the Instrument Cluster to Check for Service Messages through MY 2013.

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Press the button -3- two time to get to the menu "mode".
- Press the button -1- four times.

The service interval display starts to blink. The remaining time display in days and km appears.

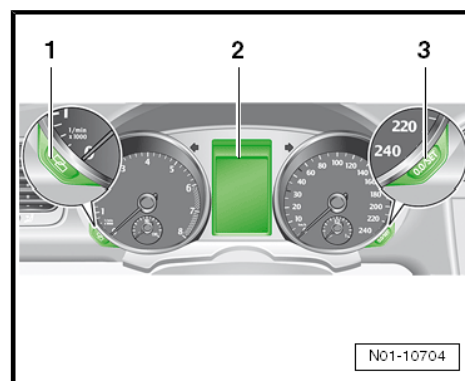
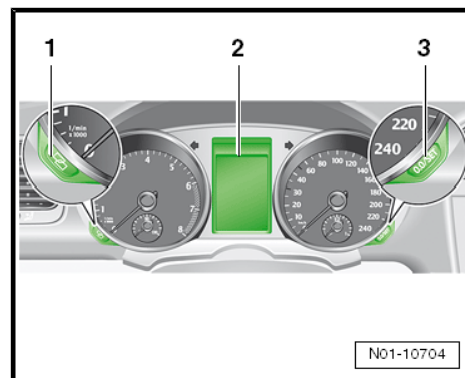
#### Sing the Buttons in the Instrument Cluster to check for Service Messages from MY 2014.

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Press the button -1-, until the "wrench symbol" appears and in the upper right of the instrument cluster display -2- the number "1" appears for oil change service.
- Press the button -1- again.

The "wrench symbol" and the upper right of the instrument cluster display -2- the number "2" for the Inspection service are displayed.

An overdue service is represented by a minus sign in front of the Kilometer- or Day counter.



## 1.15 Service Tables

⇒ ["1.15.1 Service Tables", page 29](#)

⇒ ["1.15.2 Service Tables with Market-Specific Differences", page 30](#)

### 1.15.1 Service Tables



#### Note

- ◆ *With combined distance and time measurements: whichever comes first.*
- ◆ *In addition to interval service or inspection service or other inspection service interval must be performed, depending on operating conditions and vehicle equipment. Refer to ⇒ ["1.9 Severe Operating Conditions", page 19](#).*
- ◆ *It is also possible that additional work, depending on entries in the Maintenance booklet (or sticker: Your Next Service), must be performed outside of the maintenance interval.*

Service intervals ⇒ [page 30](#)

Volkswagen approved oils ⇒ [page 30](#)





Filter change intervals ⇒ [page 30](#)

Toothed belt replacement intervals ⇒ [page 30](#)

Spark plug change intervals ⇒ [page 30](#)

#### Service Intervals



##### Caution

*Applies only to diesel engines:*

- *The diesel fuel in some countries may have a higher sulfur content.*
- *High sulfur content increases cylinder wear and reduces the cleanliness of the pistons.*

#### Volkswagen Engine Oil Standards



##### Caution

*Use only Volkswagen approved engine oils.*

Refer to ⇒ Fluid Capacity Tables; Rep. Gr. 03

#### Filter Change Interval

Refer to ⇒ Maintenance Intervals; Rep. Gr. 03

#### Toothed Belt Replacement Interval

⇒ Maintenance Intervals; Rep. Gr. 03

⇒ Maintenance Intervals; Rep. Gr. 03

#### Spark Plug Change Interval

#### Time or Distance Dependent Service Additional work

⇒ Maintenance Intervals; Rep. Gr. 03

### 1.15.2 Service Tables with Market-Specific Differences



##### Note

- ◆ *With combined distance and time measurements: whichever comes first.*
- ◆ *In addition to interval service or inspection service or other inspection service interval must be performed, depending on operating conditions and vehicle equipment  
⇒ ["1.9 Severe Operating Conditions", page 19](#) .*
- ◆ *It is also possible that additional work, depending on entries in the Maintenance booklet (or sticker: Your Next Service), must be performed outside of the maintenance interval.*



##### Note

*Only market-specific differences are explained in this chapter.  
This means maintenance points not mentioned here can be found in the regular Service tables.*





## Additional work for USA and Canada

⇒ Maintenance Intervals; Rep. Gr. 03

## 1.16 Glossary

These descriptions only apply to "Maintenance". They are not intended to be generally applicable!

Term	Description
ABS	"Anti-lock braking system", the ABS is a regulation device in the brake system, that prevents the wheels from locking up while braking. Thereby, directional stability and steering ability are retained.
Automatic Transmission Fluid	"Automatic Transmission Fluid"
ATF level	"Fill height" of the ATF in transmission.
AKF	EVAP canister
CO	"Carbon monoxide" results by incomplete combustion of fuels containing carbon
Common Rail "CR"	Refers to a shared high-pressure fuel injection line "Rail", that supplies fuel to all cylinders of a respective cylinder bank.
DIN	Deutsches Institut für Normung e.V (German Institute for Standards)
DS	Direct shift
DSG	Direct shift transmission
DWA	Anti-Theft Alarm System
ET-No.	Replacement part number or part number
EN	Euro-Norm
Refer to Electronic Parts Catalog (ET-KA).	Electronic Parts Catalog replaced micro-film
EOBD	Euro On Board Diagnostic (OBD)
FAME	Fatty Acid Methyl Ester
FSI	"Fuel Stratified Injection"; concerns the fuel injection See also TSI ⇒ <a href="#">page 32</a> ; TFSI ⇒ <a href="#">page 32</a>
IGG	Instandhaltung genau genommen (Maintenance)
LongLife Service	The LongLife service makes it possible to have extremely long inspection and oil change intervals, depending on individual driving habits and operating conditions. For LongLife Service a special engine oil is required.
LED	Light emitting diode
MIL	"Malfunction Indicator Light"
MPI	Multi Point Injection
USA and Canada	within North America
OBD	On Board Diagnostic, OBD monitors all components which influence the emission quality
OBD-II	American On Board Diagnostic (OBD)
PD	PD unit on diesel engine injection system
PR number	Abbreviation for the production control number They identify special equipment, differences for specific countries among other things
PM	"English: particulate matter" Ash particle value of Diesel engine emissions
PPM	"English: parts per million" for example, sulfur content in diesel fuel
QG0	Vehicles that are "not" equipped at the factory with the components for LongLife service. for the time- or distance-dependent interval apply to Service "fixed intervals"





Term	Description
QG1	Vehicles equipped at the factory with active LongLife service. That means vehicles have a flexible service interval display and are equipped with the following components: <ul style="list-style-type: none"> <li>◆ Flexible service interval indicator in instrument cluster</li> <li>◆ Engine oil level sensor</li> <li>◆ Brake pad wear indicator</li> </ul>
QG2	LongLife service is not activated at the factory. This means, vehicles have a fixed service interval display "time and distance dependent maintenance intervals" and are equipped with the following components: <ul style="list-style-type: none"> <li>◆ Fixed service interval display in instrument cluster</li> <li>◆ Engine oil level sensor</li> <li>◆ Brake pad wear indicator</li> </ul>
Readiness code	8-character binary code, that indicates if all emissions related diagnostics may be performed by the engine management
ROZ	"Research Octane Number" Measure for anti-knock properties of gasoline
RME biodiesel	Biodiesel
RPF	Particulate filter
TPM, TPI	Tire pressure monitoring system, tire pressure monitoring system display
SAE	"Society of Automotive Engineers" Society that creates proposals / guidelines for how regulations can be transcribed (e.g. standards)
SD	Normally aspirated Diesel engine
SDI	Normally aspirated Diesel engine with direct injection
SRE	Intake manifold injection
TFSI	Turbo "Fuel Stratified Injection"
TSI	From model year 2008, the designation TFSI is being discontinued and is being replaced by TSI. Within the designation TSI, there is a separation as TSI-Turbocharger and TSI-Twin-charger.
	TSI-Turbocharger: Charging only with turbocharger
	TSI-Twincharger: Charging with the turbocharger and the compressor
TDI	Turbo Diesel engine with direct injection
VEP	Distributor injection pump
ULEV	Ultra Low Emission Vehicles
SIE	Maintenance interval extension
ASM	Assembly









## 2 Maintenance Procedures

- ⇒ [“2.1 Removable Trailer Hitch Checking and Cleaning”, page 36](#)
- ⇒ [“2.2 Ball Joint and Axle Bearing, Checking”, page 38](#)
- ⇒ [“2.3 Automatic Headlamp Control and Static Cornering Lamp, Checking Functionality”, page 39](#)
- ⇒ [“2.4 Automatic Transmission, 09G Transmission, Changing ATF”, page 40](#)
- ⇒ [“2.5 Battery Terminals, Checking for Secure Seating”, page 41](#)
- ⇒ [“2.6 Battery, Checking with the Battery Tester VAS 6161”, page 44](#)
- ⇒ [“2.7 Battery Level, Reading - Send Diagnostic Protocol Online”, page 44](#)
- ⇒ [“2.8 Tires, Tire condition, Wear Pattern, Inflation Pressure and Tread Depth”, page 45](#)
- ⇒ [“2.9 Brake and Clutch System, Brake Fluid, Changing”, page 67](#)
- ⇒ [“2.10 Brake System and Shock Absorber, Checking for Leaks and Damage”, page 72](#)
- ⇒ [“2.11 Brake Fluid Level, Checking”, page 73](#)
- ⇒ [“2.12 6-Speed DSG transmission 02E, Changing Transmission Fluid and Filter”, page 73](#)
- ⇒ [“2.13 Brake Pad Thickness and Front and Rear Brake Rotor Condition, Checking”, page 74](#)
- ⇒ [“2.14 Diesel Fuel Filter, Replacing”, page 78](#)
- ⇒ [“2.15 Diesel Particulate Filter, Checking”, page 83](#)
- ⇒ [“2.16 Power Windows, Checking”, page 84](#)
- ⇒ [“2.17 Hood, Lubricating Hook Golf Wagon from MY 2007, Golf Wagon from MY 2010, Jetta from MY 2005”, page 84](#)
- ⇒ [“2.18 Protective Joint Boots, Visual Inspection”, page 86](#)
- ⇒ [“2.19 Engine Cover Rubber Buffer, Removing and Installing”, page 86](#)
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- ⇒ [“2.21 Hybrid Components, Checking for Damage to High Voltage Components and Cables”, page 90](#)
- ⇒ [“2.22 Inner and Outer Body, Checking for Corrosion on Open Doors and Lids”, page 91](#)
- ⇒ [“2.23 Ribbed Belt, Tension, Adjusting, Engines without Automatic Tensioner”, page 91](#)
- ⇒ [“2.24 Ribbed Belt, Checking”, page 92](#)
- ⇒ [“2.25 Instrument Panel Insert, Adapting language of menus”, page 93](#)
- ⇒ [“2.26 Compass, Setting Compass Zone and Calibrating Compass”, page 95](#)
- ⇒ [“2.27 Coolant System, Check freeze protection and coolant level”, page 99](#)
- ⇒ [“2.28 Air Filter, Cleaning Housing and Removing and Installing Filter”, page 102](#)





- ⇒ ["2.29 Memory Seat, Initializing", page 110](#)
- ⇒ ["2.30 Engine and Engine Compartment Components, Checking for Leaks and Damage From Top to Bottom", page 110](#)
- ⇒ ["2.31 Upper Engine Cover, Removing and Installing", page 112](#)
- ⇒ ["2.32 Lower Engine Compartment Cover, Removing and Installing", page 120](#)
- ⇒ ["2.33 Engine Oil Level, Checking", page 121](#)
- ⇒ ["2.34 Engine Oil, Draining or Extracting and Filling, Replacing Oil Filter", page 123](#)
- ⇒ ["2.35 Break-Down Kit, Checking", page 143](#)
- ⇒ ["2.36 Panorama Sunroof, Checking Function, Cleaning and Lubricating Guide Rails and Cleaning Wind Deflector", page 143](#)
- ⇒ ["2.37 Road Test", page 146](#)
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- ⇒ ["2.45 Windshield Wiper Protectors, Removing", page 163](#)
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- ⇒ ["2.47 Headlamps, Headlamps, Check HID Headlamps and Aim if Necessary", page 171](#)
- ⇒ ["2.48 Sunroof Water Drains, Check for Clearance and Clean if Necessary", page 175](#)
- ⇒ ["2.49 Service Interval Display, Resetting and Coding", page 177](#)
- ⇒ ["2.50 Sunroof, Checking Functionality, Cleaning and Lubricating Guide Rails", page 185](#)
- ⇒ ["2.51 Tie Rod Ends, Checking Play, Security and Joint Boots", page 188](#)
- ⇒ ["2.52 Parking Heater: Setting Week Day in Instrument Cluster Menu", page 188](#)
- ⇒ ["2.53 Dust and Pollen Filter, Cleaning Housing and Removing and Installing Filter", page 190](#)
- ⇒ ["2.54 Transportation Mode, Switching Off", page 190](#)
- ⇒ ["2.55 Transport Protection, Remove the Locking Pieces from the Front Axle Struts", page 191](#)





- ⇒ [“2.56 Door Arrester, Lubricating”, page 192](#)
- ⇒ [“2.57 Clock and Date, Setting”, page 193](#)
- ⇒ [“2.58 Underbody, Underbody Components, Checking for damage”, page 195](#)
- ⇒ [“2.59 Toothed Belt and Tensioner, Replacing \(TDI engines\)”, page 195](#)
- ⇒ [“2.60 Camshaft Drive Toothed Belt, Checking, TDI”, page 196](#)
- ⇒ [“2.61 Camshaft Drive Toothed Belt, Replacing \(2.0L FSI and TFSI\)”, page 196](#)
- ⇒ [“2.62 Camshaft Drive Toothed Belt, 4-Cylinder Gasoline Engines without Change Interval, Checking”, page 196](#)
- ⇒ [“2.63 Coolant Pump Toothed Belt, Checking”, page 198](#)
- ⇒ [“2.64 Spark Plugs, Replacing”, page 200](#)
- ⇒ [“2.65 DTC Memories, Checking with Vehicle Diagnostic Tester and Correcting Faults According to Repair Procedure”, page 215](#)

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## 2.1 Removable Trailer Hitch Checking and Cleaning

This chapter explains how to check the removable trailer hitch and how to service it if necessary.

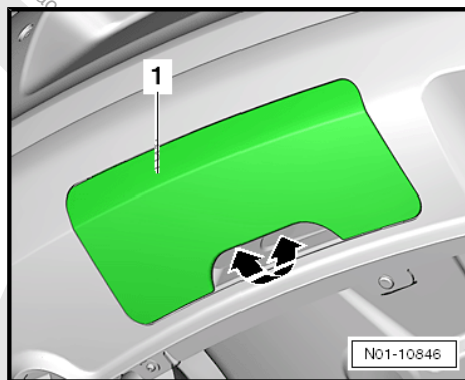


### Note

*Note that checking the trailer hitch is included in the Service. Servicing the ball head is a repair and has a separate charge. It must be customer request.*

### Checking

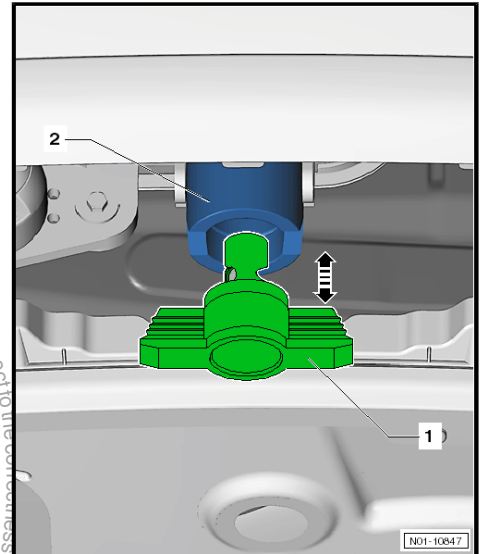
- Remove the cover -1-.







- Remove the cap -1- from the ball head mount -2-.
- Insert the ball head into the mount.



After the ball head is installed, the green marking on the hand wheel must match up with the white mark on the ball head. The hand wheel must make complete contact. The trailer hitch lock must lock when the key is removed. If this does not happen, perform the following repair.

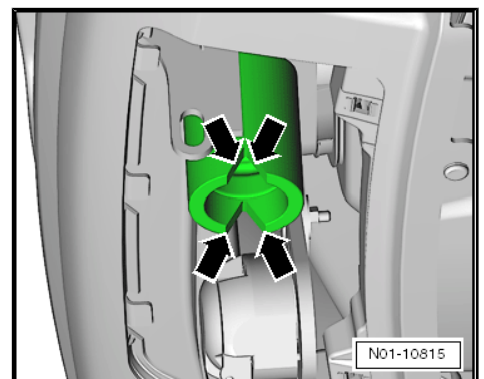
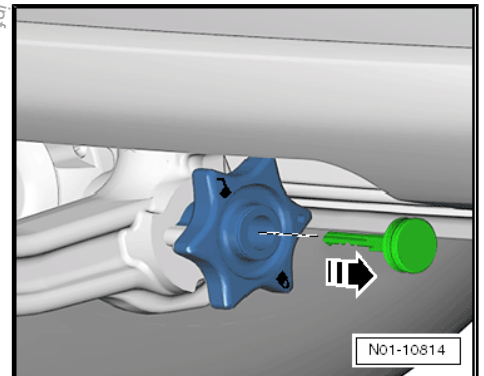


#### Note

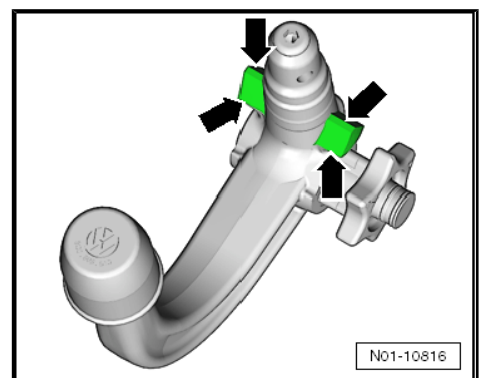
*If it is necessary to service the ball head, discuss this first with the customer. Servicing the ball head has a separate charge.*

#### Procedure

- Check the surfaces -arrows- on the ball head mount for corrosion.
- If there is corrosion on the surfaces, scrape it off with a three sided scraper then clean the surface with silicone remover.
- Apply a light coat of G 000 650 or G 000 150 paste to the cleaned surfaces.



- Check the surfaces -arrows- on the ball head for corrosion.
- If there is corrosion on the surfaces, scrape it off with a three sided scraper then clean the surface with silicone remover.
- Apply a light coat of G 000 650 or G 000 150 paste to the cleaned surfaces.
- Make sure the ball head fits correctly inside the mount. Refer to [page 36](#).





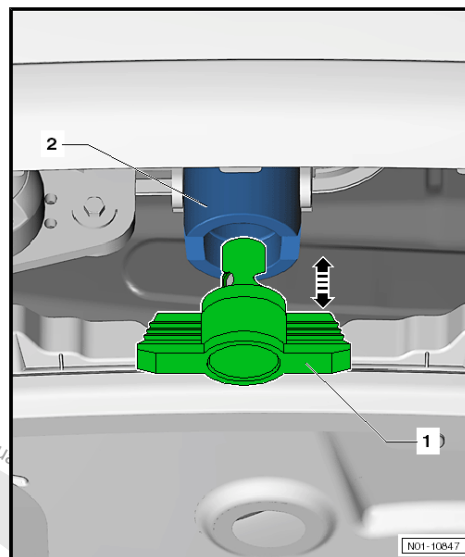


- Install the cap -1- into the ball head mount -2-.

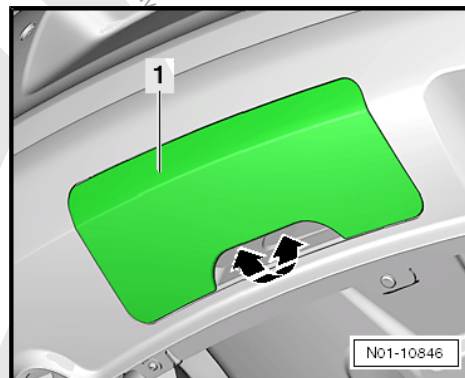


#### Note

*If the cap is missing or damaged, a new one must be installed to prevent corrosion around the ball head mount. For a replacement cap, refer to the Electronic Parts Catalog Refer to ➔ Electronic Parts Catalog (ETKA) .*

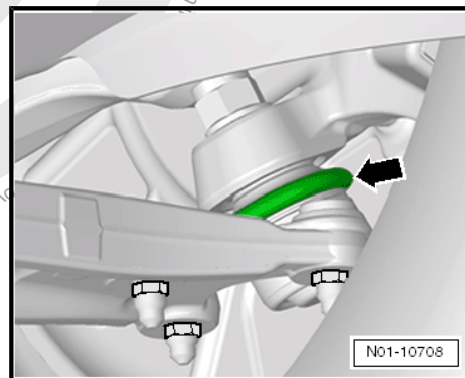


- Install the cover -1-.

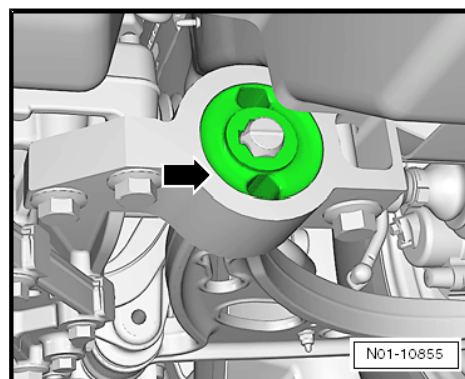


## 2.2 Ball Joint and Axle Bearing, Checking

- Check ball joint boots -arrow- for leaks and damage.
- Check the axle bearing -arrow- for the following damage:



Axle bearing Jetta from MY 2005, Golf Wagon from MY 2007, Golf Wagon from MY 2010







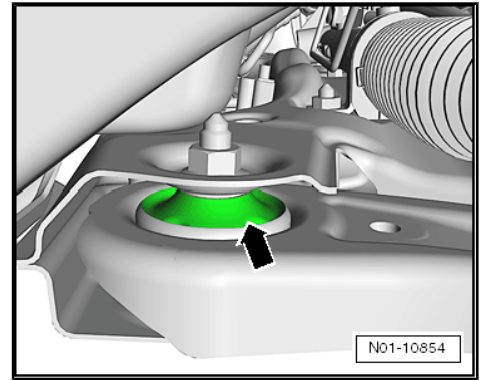
### Axle bearing Jetta from MY 2011

- ◆ Large cracks, tears or cuts in the rubber piece.
- ◆ Complete tear of the connection between rubber molded part and metal.
- ◆ Large amount of play between the bearing and the axle components, which can significantly influence the bearing negatively.



#### Note

*Rips and tears that are only on the surface such as small detachments between the rubber molded part and metal do not influence the function of the elastokinematic bearing and are not cause for complaint.*



## 2.3 Automatic Headlamp Control and Static Cornering Lamp, Checking Functionality

⇒ ["2.3.1 Automatic Headlamp Control, Checking Functionality", page 39](#)

⇒ ["2.3.2 Static Cornering Lamp, Checking", page 40](#)

### 2.3.1 Automatic Headlamp Control, Checking Functionality



#### Note

*The automatic headlamp control is also called automatic headlamps.*

- Vehicle must be in daylight.

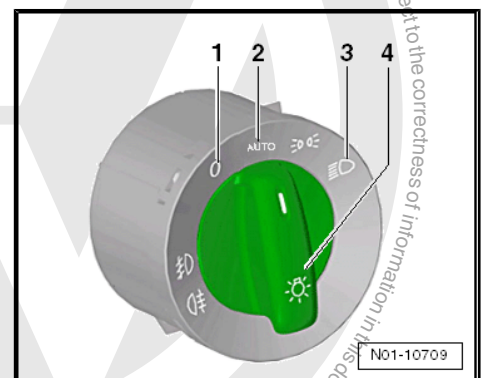
#### Checking in Daylight or Brightness

- Switch on the ignition.
- Turn the headlamp switch -4- to the automatic headlamp control position -2-.

The headlamp should not come on when it is bright.

#### Checking at Night or in Darkness

- Ignition is switched on
- The headlamp switch is in the automatic headlamp control position.





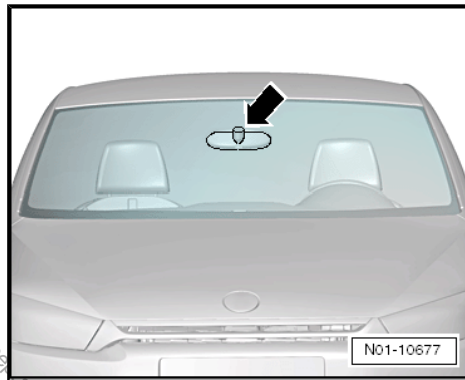


Rain/Light Recognition Sensor is secured to rearview mirror bracket.

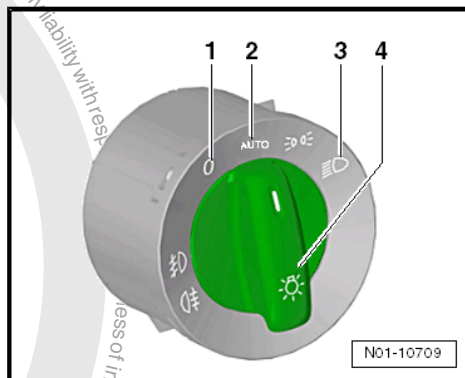
Rain/Light Recognition Sensor is located in upper center area of front windshield -arrow-.

- Cover the base of the interior rearview mirror -arrow- with your hand or some suitable object.

The decrease in light is measured and the headlamps are switched on.



- Turn the headlamp switch -4- to O -1- and turn off the ignition.



## 2.3.2 Static Cornering Lamp, Checking

- Vehicle parked, steering wheel in straight ahead position



### Note

- ◆ Vehicles with static cornering lamps have an extra bulb inside the headlamp or the fog lamps perform this function.
- ◆ The static cornering light only functions in conjunction with the low beams.

- Turn on the ignition and the low beams.
- Turn steering wheel one turn to the right out of straight position and check in right headlamp whether cornering light bulb comes on.
- Turn steering wheel one turn to the left out of straight position and check in left headlamp whether cornering light bulb comes on.

Cornering light must go out when steering wheel is in straight position.

## 2.4 Automatic Transmission, 09G Transmission, Changing ATF

- Refer to ➔ Automatic Transmission; Rep. Gr. 37 ; General Information





## 2.5 Battery Terminals, Checking for Secure Seating

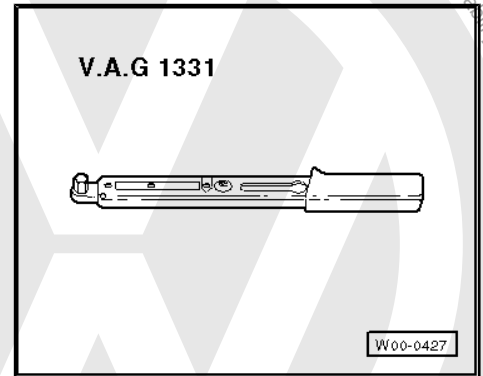
⇒ "2.5.1 Battery in Engine Compartment", page 41

⇒ "2.5.2 Battery Inside Luggage Compartment", page 43

### 2.5.1 Battery in Engine Compartment

Special tools and workshop equipment required

- ◆ Torque Wrench 5-50 Nm - V.A.G 1331-

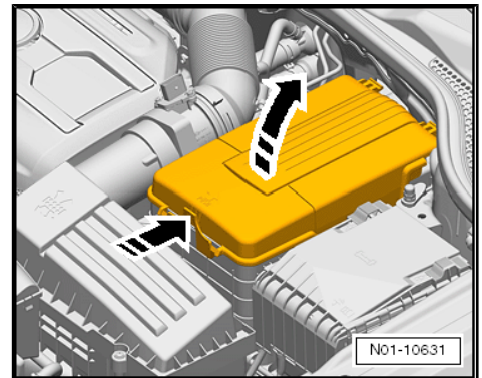


#### Note

- ◆ *Tight battery connections assure trouble-free battery function and long service life.*
- ◆ *Make sure the terminal clamp is attached completely to the battery pole.*

Perform the following procedure:

- Open the batter cover, if equipped.



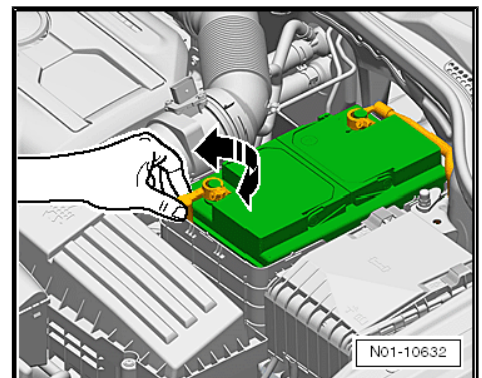
- Move the positive and negative battery terminals back and forth to make sure they are securely attached.



#### WARNING

*If battery positive (B+) connection is loose, disconnect ground (GND) cable first before attempting to remove or tighten plus connection, to prevent personal injury.*

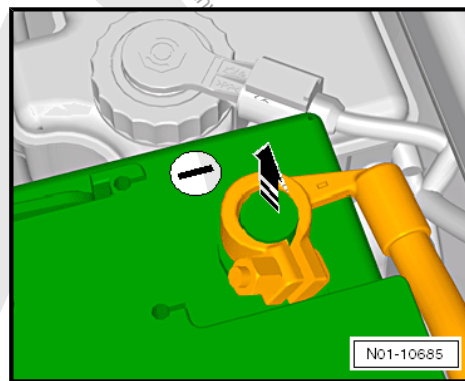
If the battery clamp on positive terminal is NOT seated securely:



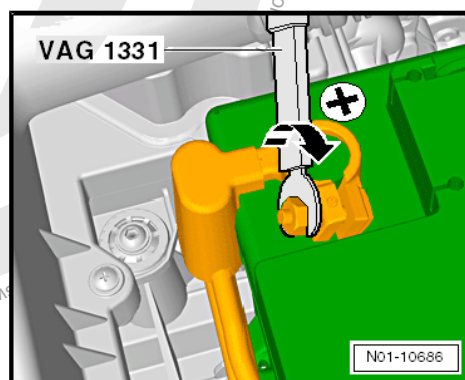




- Loosen and remove the -MINUS- battery terminal.

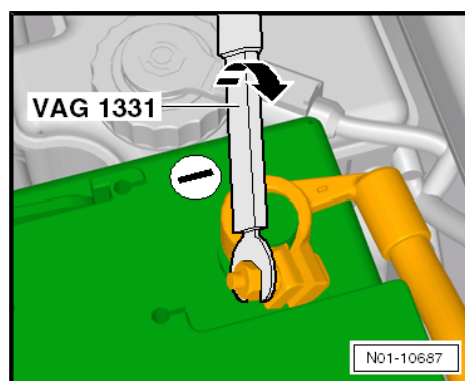


- Tighten the -PLUS- battery terminal to 6 Nm using Torque Wrench 5-50 Nm - V.A.G 1331- and Torque Wrench 1331 Insert - Reversible Ratchet - V.A.G. 1331/1- .

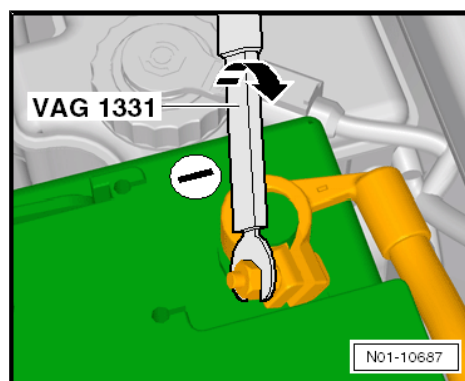


- Connect and tighten the -MINUS- battery terminal to 6 Nm using Torque Wrench 5-50 Nm - V.A.G 1331- and Torque Wrench 1331 Insert - Reversible Ratchet - V.A.G. 1331/1- .

**If ground connection on battery terminal is NOT tight:**



- Tighten the -MINUS- on the battery terminal to 6 Nm using Torque Wrench 5-50 Nm - V.A.G 1331- and Torque Wrench 1331 Insert - Reversible Ratchet - V.A.G. 1331/1- .





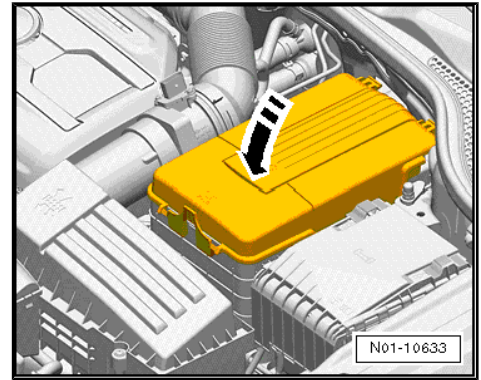


- Install the cover, if equipped.



#### Note

*Once the battery is reconnected. Refer to ⇒ Electrical Equipment; Rep. Gr. 27 ; Removal and Installation "Battery, Connecting/ Steps After Connecting Battery".*



## 2.5.2 Battery Inside Luggage Compartment

Special tools and workshop equipment required

- ◆ Torque Wrench 5-50 Nm - V.A.G 1331-

V.A.G 1331



W00-0427



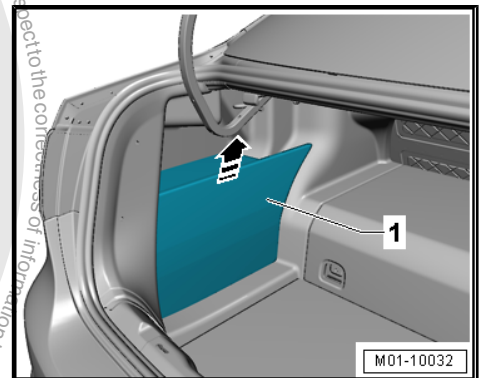
#### Note

- ◆ *Tight battery connections assure trouble-free battery function and long service life.*
- ◆ *Make sure the terminal clamp is attached completely to the battery pole.*

Perform the following procedure:

The 12 V battery is located inside the luggage compartment on the left side.

- Remove the cover -1- in direction of -arrow-.







- Fold open the terminal covers and remove them if necessary.
- Check battery terminal clamps are seated securely on the battery terminals by moving the battery Ground (GND) wire -1- and the battery positive wire -2- to and fro by hand.



#### WARNING

*If the battery terminal clamp is loose on the positive terminal, then disconnect the battery clamp from the negative terminal first to avoid any danger in case of a crash.*

**If the battery clamp on positive terminal is not seated securely:**

- Disconnect the battery clamp -1- from the battery negative terminal.
- Tighten battery clamp -2- on battery positive terminal to 6 Nm.
- Install the positive terminal cover.
- Connect the battery clamp -1- to the battery negative terminal and tighten it to 6 Nm.
- Install cover

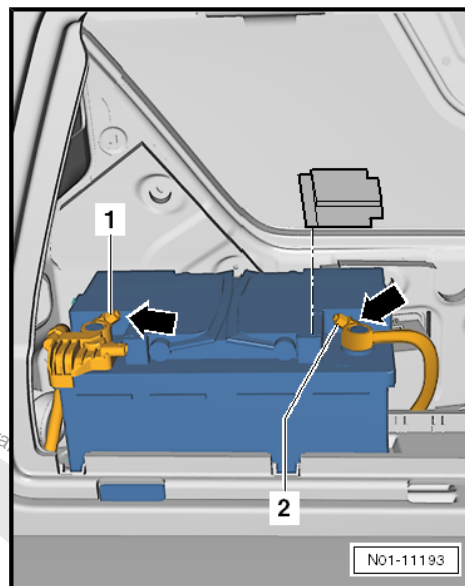
**If ground connection on battery is not tight:**

- Connect the battery clamp -1- to the battery negative terminal and tighten it to 6 Nm.
- Install cover



#### Note

*Once the battery is reconnected. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Removal and Installation "Battery, Connecting/Steps After Connecting Battery".*



## 2.6 Battery, Checking with the Battery Tester - VAS 6161-

### Procedure

Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 27; Diagnosis and Testing .

## 2.7 Battery Level, Reading - Send Diagnostic Protocol Online



#### Note

*Only for vehicles with start/stop system and regeneration.*

### Procedure

The battery level is read while the transport mode is being deactivated. Refer to  
⇒ ["2.54 Transportation Mode, Switching Off", page 190](#) .





## 2.8 Tires, Tire condition, Wear Pattern, Inflation Pressure and Tread Depth

⇒ ["2.8.1 General Information", page 45](#)

⇒ ["2.8.2 Tires, Checking Condition", page 46](#)

⇒ ["2.8.3 Tires, Checking Wear Pattern", page 46](#)

⇒ ["2.8.4 Tires including Spare Wheel, Checking", page 47](#)

⇒ ["2.8.5 Tire Pressures, Golf Wagon from MY 2007", page 47](#)

⇒ ["2.8.6 Tire Pressures, Jetta from MY 2005 and Jetta from MY 2006", page 52](#)

⇒ ["2.8.7 Tire Pressures, Golf Wagon from MY 2010", page 57](#)

⇒ ["2.8.8 Tire Pressures, Jetta from MY 2011", page 57](#)

### 2.8.1 General Information



#### WARNING

- ◆ *For safety reasons, all tires on the vehicle should be of the same make and tread design. For a list of the approved wheel/tire combinations, refer to ⇒ [Wheel and Tire Guide; Rep. Gr. 44 ; Specifications](#) .*
- ◆ *On AWD vehicles, always use tires of the same make and tread design. If not, the center differential can get damaged.*



#### Note

- ◆ *The tire pressure table applies only for normal tires, for all factory installed tire sizes.*
- ◆ *The tire pressures for relevant model are found on a sticker. This sticker is on the inside of the fuel filler door or on the B-pillar.*
- ◆ *Observe that the inflation pressure specifications on the sticker refer to the air pressure of cold tires. Do not reduce tire pressure when the tires are warm.*
- ◆ *Adjust tire pressure accordingly.*
- ◆ *If the tire pressure for the spare wheel is not listed, then fill the spare wheel with the highest tire pressure specified for the vehicle.*
- ◆ *On vehicles with tire pressure monitoring display, make sure that a basic setting is performed after each pressure adjustment,  
⇒ ["2.41 Tire Pressure Monitoring Display, Perform the basic setting", page 156](#) .*





## Winter tires



### Note

- ◆ *Recommended winter tires, refer to ⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .*
- ◆ *If winter tires are mounted, a label informing the customer of the speed limit must be affixed inside the passenger compartment so that it is clearly visible.*
- ◆ *On winter tires, the tire pressure must no longer be increased. But this is true only when the winter tires being used are the exact same size as the standard summer tire, and the speed index does not exceed "H". If you deviate from this, then you must follow the tire manufacturer recommendations.*



### Note

*For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually.*

## 2.8.2 Tires, Checking Condition



### WARNING

***If damage is discovered, the tire must be examined to determine whether a new one must be installed.***

### Tests during Delivery Inspection:

- Check tire tread and side walls for damage, if necessary remove any foreign bodies, such as nails or screws.

### Checks during Inspection Service

- Check tire tread and side walls for damage, if necessary remove any foreign bodies, such as nails or screws.
- Check tire treads for cupping, feathering, one-sided tread wear, porous side walls, cracks, cuts, and rim damage.

## 2.8.3 Tires, Checking Wear Pattern

The tread wear on the front tires will help determine whether toe or camber need to be checked.

- ◆ Feathered edges of the treads may indicate faulty toe adjustment.
- ◆ One-sided tread wear is mostly caused by faulty camber.

If such wear patterns are found, determine the causes by checking the wheel alignment (repair measure).





## 2.8.4 Tires including Spare Wheel, Checking

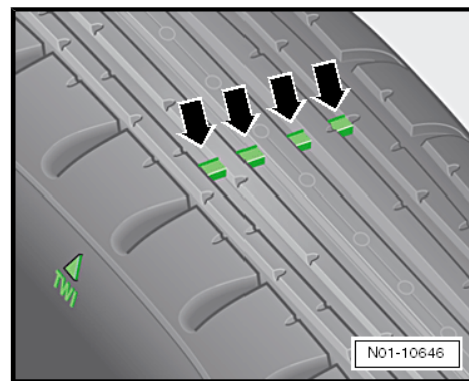
### – Tread Depth, Checking

Minimum tread depth: 1.6 mm



#### Note

- ◆ *This value may vary for individual countries due to different legislative regulations. Ask the importer.*
- ◆ *The minimum tread depth is reached when the tires have worn down level with the 1.6 mm high tread wear indicators -arrows- positioned at intervals around the tire.*
- ◆ *If the tread wear is close to the wear limits, inform customer and note findings on the repair order.*



## 2.8.5 Tire Pressures, Golf Wagon from MY 2007

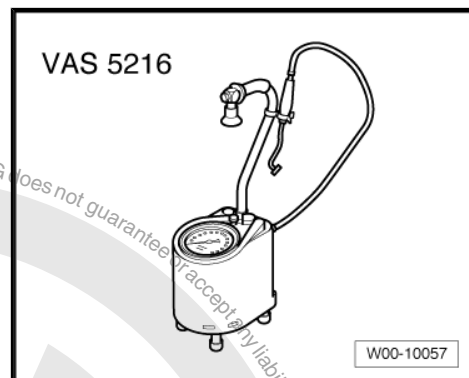
### Special tools and workshop equipment required

- ◆ Tire Inflation Device/Tire Filler Unit - VAS 5216-



#### Note

- ◆ *Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.*
- ◆ *The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on driver side B-pillar.*
- ◆ *If the tire pressure label is missing, do the following:*
- ◆ *Get the correct part number for the vehicle in the Parts Catalog.*
- ◆ *Get the tire pressure from the tire pressure label.*
- ◆ *Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ➤ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications*



Tire inflation pressure (including spare wheel): Checking, correcting inflation pressures using Tire Inflation Device/Tire Filler Unit - VAS 5216- if necessary.

### Gasoline Engines

1.4L / 88, 90 kW, ➤ [page 48](#)





1.4L / 103 kW, ➤ [page 48](#) .

1.4L / 118, 125 kW, ➤ [page 48](#)

1.6L / 75 kW, ➤ [page 49](#) .

1.6L / 85 kW, ➤ [page 49](#) .

2.0L / 85 kW, ➤ [page 49](#) .

2.0L / 110 kW, ➤ [page 50](#) .

2.0L / 147 kW, ➤ [page 50](#) .

2.5L / 110 kW, ➤ [page 50](#) .

### Diesel Engines

1.9L / 74 kW TDI ➤ [page 50](#)

1.9L / 77 kW TDI, ➤ [page 51](#)

1.9L / 77 kW TDI BlueMotion, ➤ [page 51](#)

2.0L / 100 + 103 kW TDI, ➤ [page 51](#)

2.0L / 125 kW TDI, ➤ [page 51](#)

1.9L / 77 kW TDI AWD, ➤ [page 52](#)

### Gasoline engine

Displacement / output				
1.4L / 88 kW / 90 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

### Gasoline engine

Displacement / output				
1.4l / 103kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

### Gasoline engine

Displacement / output				
1.4L / 118, 125 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.3	2.3	2.5	3.0
225/45 R 17	2.3	2.3	2.5	3.0
225/40 R 18	2.3	2.3	2.5	3.0





Displacement / output				
1.4L / 118, 125 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
Mini spare tire	4.2	4.2	4.2	4.2

#### Gasoline engine

Displacement / output				
1.6l / 75 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

#### Gasoline engine

Displacement / output				
1.6L / 85 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

#### Gasoline engine

Displacement / output				
2.0L / 85 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2





### Gasoline engine

Displacement / output				
2.0L / 110 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

### Gasoline engine

Displacement / output				
2.0L / 147 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

### Gasoline engine

Displacement / output				
2.5 L / 110 kW				
Tire sizes	Half load		Full load	
	Front (bar / kPa / psi)	Rear (bar / kPa / psi)	Front (bar / kPa / psi)	Rear (bar / kPa / psi)
195/65 R 15	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
205/55 R 16	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/45 R 17	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

### Diesel engine

Displacement / output				
1.9L / 74 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar / kPa / psi)	Rear (bar / kPa / psi)	Front (bar / kPa / psi)	Rear (bar / kPa / psi)
195/65 R 15	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
205/55 R 16	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
225/45 R 17	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
Mini spare tire	4.2	4.2	4.2	4.2





## Diesel engine

Displacement / output				
1.9L / 77 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## Diesel engine

Displacement / output				
1.9L / 77 kW TDI BlueMotion				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.5	2.5	2.5	2.9
205/55 R 16	2.5	2.5	2.5	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## Diesel engine

Displacement / output				
2.0L / 100 + 103 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## Diesel engine

Displacement / output				
2.0L / 125 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.4	2.4	2.6	3.0
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2





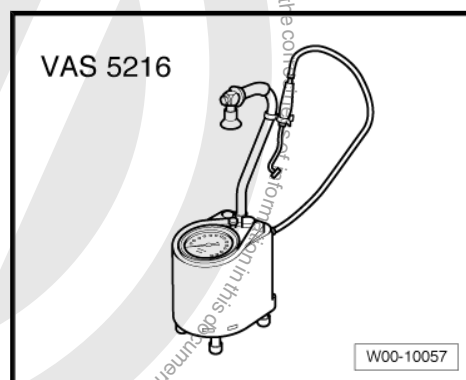
## Diesel engine

Displacement / output				
1.9L / 77 kW TDI AWD				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## 2.8.6 Tire Pressures, Jetta from MY 2005 and Jetta from MY 2006

### Special tools and workshop equipment required

- ♦ Tire Inflation Device/Tire Filler Unit - VAS 5216-



### Note

- ♦ *Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.*
- ♦ *The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on driver side B-pillar.*
- ♦ *If the tire pressure label is missing, do the following:*
- ♦ *Get the correct part number for the vehicle in the Parts Catalog.*
- ♦ *Get the tire pressure from the tire pressure label.*
- ♦ *Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ➔ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .*

Tire inflation pressure (including spare wheel): Checking, correcting inflation pressures using Tire Inflation Device/Tire Filler Unit - VAS 5216- if necessary.

### Gasoline Engines

1.4L / 88, 90 kW,

1.4L / 103 kW,





1.4L / 118, 125 kW,

1.6L / 75 kW,

1.6L / 85 kW,

2.0L / 85 kW,

2.0L / 110 kW,

2.0L / 147 kW,

2.5L / 110 kW,

#### Diesel Engines

1.9L / 74 kW TDI

1.9L / 77 kW TDI,

1.9L / 77 kW TDI BlueMotion,

2.0L / 100 + 103 kW TDI,

2.0L / 125 kW TDI,

1.9L / 77 kW TDI All Wheel Drive,

#### Gasoline engine

Displacement / output				
1.4L / 88 kW / 90 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

#### Gasoline engine

Displacement / output				
1.4l / 103kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

#### Gasoline engine

Displacement / output				
1.4L / 118, 125 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.3	2.3	2.5	3.0
225/45 R 17	2.3	2.3	2.5	3.0
225/40 R 18	2.3	2.3	2.5	3.0





Displacement / output				
1.4L / 118, 125 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
Mini spare tire	4.2	4.2	4.2	4.2

### Gasoline engine

Displacement / output				
1.6L / 75 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

### Gasoline engine

Displacement / output				
1.6L / 85 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

### Gasoline engine

Displacement / output				
2.0L / 85 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2





## Gasoline engine

Displacement / output				
2.0L / 110 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## Gasoline engine

Displacement / output				
2.0L / 147 kW				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

## Gasoline engine

Displacement / output				
2.5 L / 110 kW				
Tire sizes	Half load		Full load	
	Front (bar / kPa / psi)	Rear (bar / kPa / psi)	Front (bar / kPa / psi)	Rear (bar / kPa / psi)
195/65 R 15	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
205/55 R 16	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/45 R 17	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

## Diesel engine

Displacement / output				
1.9L / 74 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar / kPa / psi)	Rear (bar / kPa / psi)	Front (bar / kPa / psi)	Rear (bar / kPa / psi)
195/65 R 15	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
205/55 R 16	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
225/45 R 17	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
Mini spare tire	4.2	4.2	4.2	4.2





## Diesel engine

Displacement / output				
1.9L / 77 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## Diesel engine

Displacement / output				
1.9L / 77 kW TDI BlueMotion				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.5	2.5	2.5	2.9
205/55 R 16	2.5	2.5	2.5	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## Diesel engine

Displacement / output				
2.0L / 100 + 103 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## Diesel engine

Displacement / output				
2.0L / 125 kW TDI				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.4	2.4	2.6	3.0
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2





## Diesel engine

Displacement / output				
1.9L / 77 kW TDI AWD				
Tire sizes	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

## 2.8.7 Tire Pressures, Golf Wagon from MY 2010

### Special tools and workshop equipment required

- ◆ Tire Inflation Device/Tire Filler Unit - VAS 5216-



### Note

- ◆ Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.
- ◆ The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on driver side B-pillar.
- ◆ If the tire pressure label is missing, do the following:
- ◆ Get the correct part number for the vehicle in the Parts Catalog.
- ◆ Get the tire pressure from the tire pressure label. Refer to <sup>10)</sup>.
- ◆ Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ➤ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Tire inflation pressure (including spare wheel): Checking, correcting inflation pressures using Tire Inflation Device/Tire Filler Unit - VAS 5216- if necessary.

10) Information not available at the time of printing

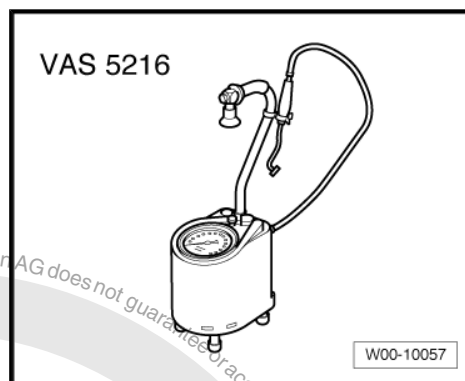
## 2.8.8 Tire Pressures, Jetta from MY 2011

### Special tools and workshop equipment required





◆ Tire Inflation Device/Tire Filler Unit - VAS 5216-



**Note**

- ◆ *Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.*
- ◆ *The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on driver side B-pillar.*
- ◆ *If the tire pressure label is missing, do the following:*
- ◆ *Get the correct part number for the vehicle in the Parts Catalog.*
- ◆ *Get the tire pressure from the tire pressure label.*
- ◆ *Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .*

Tire inflation pressure (including spare wheel): Checking, correcting inflation pressures using Tire Inflation Device/Tire Filler Unit - VAS 5216- if necessary.



Part Number - 5C0 010 695 C-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	200/2.0/29	200/2.0/29	230/2.3/33	280/2.8/41

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 748 R-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	230/2.3/33	230/2.3/33	230/2.3/33	280/2.8/41

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .





Part Number - 5C0 010 755 G-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	210/2.1/30	210/2.1/30	230/2.3/33	280/2.8/41

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 695-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 823 D-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	220/2.2/32	220/2.2/32	250/2.5/36	300/3.0/44

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 695 K-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	250/2.5/36	250/2.5/36	270/2.7/39	300/3.0/44

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 694 R-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .





Part Number - 5C0 010 748 S-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	250/2.5/36	250/2.5/36	250/2.5/36	290/2.9/42

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 649 R-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 695 D-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	230/2.3/33	230/2.3/33	250/2.5/36	300/3.0/44

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 830 Q-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	250/2.5/36	250/2.5/36	260/2.6/38	300/3.0/44

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 830 R-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	240/2.4/35	240/2.4/35	260/2.6/38	300/3.0/44

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .





Part Number - 5C0 010 775 G-		Jetta from MY 2011		
		Half load kPa/bar/psi		Full load kPa/bar/psi
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	210/2.1/30	210/2.1/30	230/2.3/33	280/2.8/41

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 779 Q-		Jetta from MY 2011		
		Half load bar/psi		Full load bar/psi
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.4/35	2.4/35	2.6/38	3.0/44

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 792 A-		Jetta from MY 2011		
		Half load kPa/bar		Full load kPa/bar
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	220/2.2	220/2.2	240/2.4	290/2.9
225/45 R17 91W				
255/40 R18 92Y				

Part Number - 5C0 010 792 B-		Jetta from MY 2011		
		Half load kPa/bar		Full load kPa/bar
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	250/2.5	250/2.5	270/2.7	300/3.0
225/45 R17 91W				
255/40 R18 92Y				

Part Number - 5C0 010 792-		Jetta from MY 2011		
		Half load kPa/bar		Full load kPa/bar
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	230/2.3	230/2.3	250/2.5	300/3.0
225/45 R17 91W				
255/40 R18 92Y				





Part Number - 5C0 010 823 E-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	220/2.2	220/2.2	240/2.4	290/2.9
225/45 R17 91W				
255/40 R18 92Y				

Part Number - 5C0 010 838 S-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	220/2.2	220/2.2	240/2.4	290/2.9
225/45 R17 91W				
225/40 R18 92Y				

Part Number - 5C0 010 838 T-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	250/2.5	250/2.5	270/2.7	300/3.0
225/45 R17 91W				
225/40 R18 92Y				

Part Number - 5C0 010 839-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	230/2.3	230/2.3	250/2.5	300/3.0
225/45 R17 91W				
225/40 R18 92Y				

Part Number - 5C0 010 830 T-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/50 R17 93V XL	240/2.4	240/2.4	260/2.6	300/3.0

Part Number - 5C0 010 830 S-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/50 R17 93V XL	250/2.5	250/2.5	260/2.6	300/3.0





Part Number - 5C0 010 819 E-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.0	2.0	2.3	2.8

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 819 Q-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.3	2.3	2.3	2.8

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 819-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.1	2.1	2.3	2.8

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 819 B-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.2	2.2	2.5	3.0

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 819 A-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.3	2.3	2.5	3.0

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .





Part Number - 5C0 010 819 C-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.2	2.2	2.4	2.9

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 819 D-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.5	2.5	2.5	2.9

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 819 R-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.5	2.5	2.7	3.0

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 795 Q-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>				

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 831 J-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.4	2.4	2.6	3.0

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .





Part Number - 5C0 010 831 H-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all <sup>1)</sup>	2.5	2.5	2.6	3.0

<sup>1)</sup> Applies to all approved wheel/tire/wheel combinations. Refer to  
⇒ Wheel and Tire Guide; Rep. Gr. 44 ; Specifications .

Part Number - 5C0 010 782 J-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
195/65 R15	200/29	200/29	200/29	200/29
195/65 R15 <sup>1)</sup>	200/29			
205/55 R16 <sup>1)</sup>				

<sup>1)</sup> Spare wheel

Part Number - 5C0 010 782 K-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/55 R16	200/29	200/29	200/29	200/29
195/65 R15 <sup>1)</sup>	200/29			
205/55 R16 <sup>1)</sup>				

<sup>1)</sup> Spare wheel

Part Number - 5C0 010 782 L-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/55 R16	220/32	220/32	220/32	220/32
195/65 R15 <sup>1)</sup>	220/32			
205/55 R16 <sup>1)</sup>				

<sup>1)</sup> Spare wheel

Part Number - 5C0 010 782 M-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R17	220/32	220/32	220/32	220/32
195/65 R15 <sup>1)</sup>	220/32			
205/55 R16 <sup>1)</sup>				

<sup>1)</sup> Spare wheel





Part Number - 5C0 010 645 M-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/55 R16	230/33	230/33	230/33	230/33
195/65 R15 <sup>1)</sup>	230/33			
205/55 R16 <sup>1)</sup>				

<sup>1)</sup> Spare wheel

Part Number - 5C0 010 694 S-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R17	230/33	230/33	230/33	230/33
195/65 R15 <sup>1)</sup>	230/33			
205/55 R16 <sup>1)</sup>				

<sup>1)</sup> Spare wheel

Part Number - 5C0 010 695 A-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R17	240/35	240/35	240/35	240/35
205/55 R16 <sup>1)</sup>	240/35			

<sup>1)</sup> Spare wheel

Part Number - 5C0 010 695 G-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R18	270/39	270/39	270/39	270/39
205/55 R16 <sup>1)</sup>	270/39			

<sup>1)</sup> Spare wheel

Part Number - 5C0 010 784 D-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
195/65 R15	280/41	280/41	280/41	280/41
125/90 R16 <sup>1)</sup>	420/60			

<sup>1)</sup> Emergency spare wheel





Part Number - 5C0 010 844 H-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/55 R16	280/41	280/41	280/41	280/41
125/90 R16 <sup>1)</sup>	420/60			

<sup>1)</sup> Emergency spare wheel

Part Number - 5C0 010 784 E-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/50 R17	280/41	280/41	280/41	280/41
125/90 R16 <sup>1)</sup>	420/60			

<sup>1)</sup> Emergency spare wheel

## 2.9 Brake and Clutch System, Brake Fluid, Changing

⇒ ["2.9.1 Application Information and Safety Precautions", page 67](#)

⇒ ["2.9.2 Brake Fluid Specifications", page 68](#)

⇒ ["2.9.3 Brake Fluid, Changing", page 68](#)

### 2.9.1 Application Information and Safety Precautions



#### Note

- ◆ A new brake fluid had been used since MY 2006.
- ◆ The new brake fluid can also be used in older vehicles.
- ◆ New brake fluid can be mixed with previous brake fluid.





#### WARNING

- ◆ **Brake fluid must never come into contact with fluids containing mineral oils (oil, gas, cleaning solutions). Oils containing minerals damage seals and sleeves on brake systems.**
- ◆ **Brake fluid is poisonous. Do not let brake fluid come in contact with the paint.**
- ◆ **Brake fluid is hygroscopic, which means that it absorbs moisture from the air. Always store brake fluid in air-tight containers.**
- ◆ **Wash off any spilled brake fluid with plenty of water.**
- ◆ **Do not reuse used / extracted brake fluid!**
- ◆ **Follow all disposal regulations.**

## 2.9.2 Brake Fluid Specifications

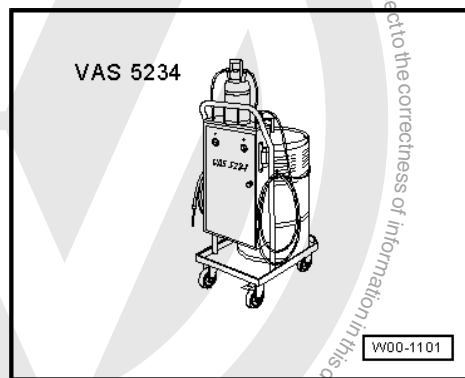
### Permitted brake fluid specifications:

- ◆ Brake fluid corresponding to US standard FMVSS 116 DOT 4 (previous brake fluid).
- ◆ Brake fluid corresponding to VW standard, VW 501 14 (new brake fluid).

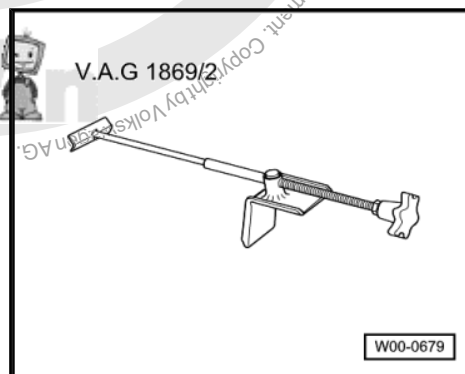
## 2.9.3 Brake Fluid, Changing

### Special tools and workshop equipment required

- ◆ Brake Charger/Bleeder Unit - VAS 5234-



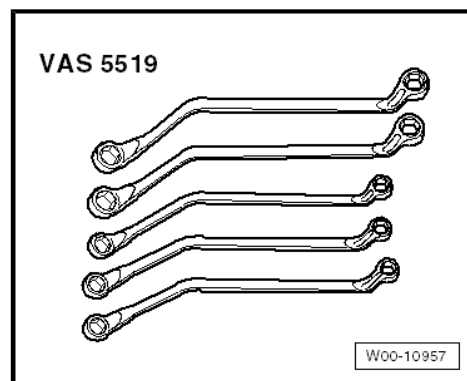
- ◆ Brake Pedal Actuator - V.A.G 1869/2-



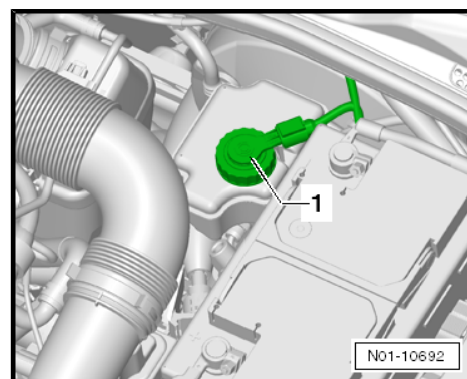




◆ Brake Bleeder Wrench Set - VAS 5519-



- Remove the cap -1- from the brake fluid reservoir.



- Use the hose from the Brake Charger/Bleeder Unit - VAS 5234- to extract as much brake fluid as possible.



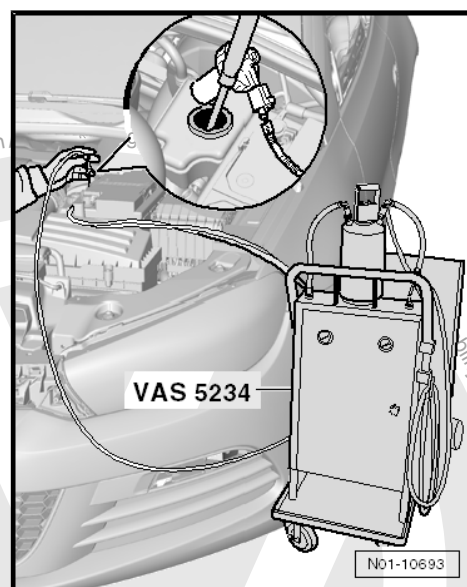
**Note**

*Do not remove the strainer inside the brake fluid reservoir.*



**WARNING**

***Do not use extracted brake fluid again!***







- Attach the adapter -1- to the brake fluid reservoir.

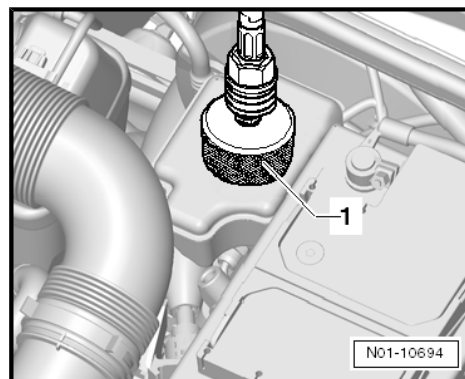
Refer to the ⇒ Operating Instructions that come with Brake Charger/Bleeding Unit - VAS 5234- .

- Set the correct pressure using a Brake Charger/Bleeding Unit - VAS 5234- : Suspension, Brake Systems. Refer to ⇒ Brake Systems; Rep. Gr. 47 ; Diagnosis and Testing .
- Connect the hose from the Brake Charger/Bleeding Unit - VAS 5234- to the adapter -1-.

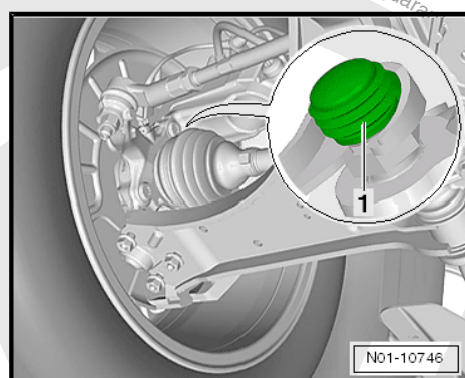


**Note**

*Use a suitable bleed hose. It must seat tightly on the bleed valve so that no air can get into the brake system.*



- Remove the cap -1- from the bleed valve on the left front brake caliper.
- Mount the Brake-Bleeder Tool - VAS 5519- .

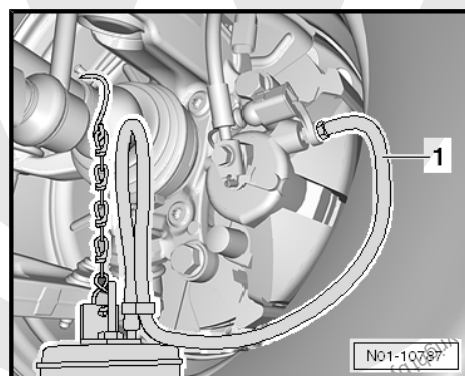


- Connect collector bottle bleed hose -1- to left front bleed valve. Then open the bleed valve and allow the corresponding quantity to flow out (see table). Close the bleed valve. Torque, refer to ⇒ Brake Systems; Rep. Gr. 47 ; Diagnosis and Testing

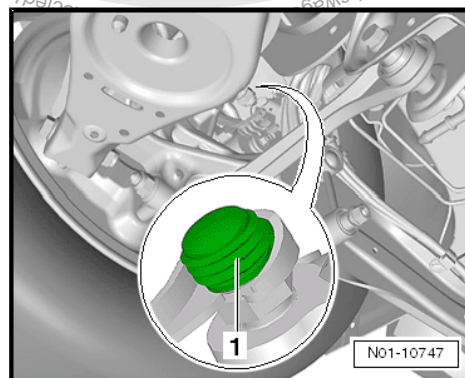
- Install the cap on the left front brake caliper bleed valve.

Repeat the same procedure on the right front side of the vehicle.

- Remove both rear wheels to access the bleed valve.



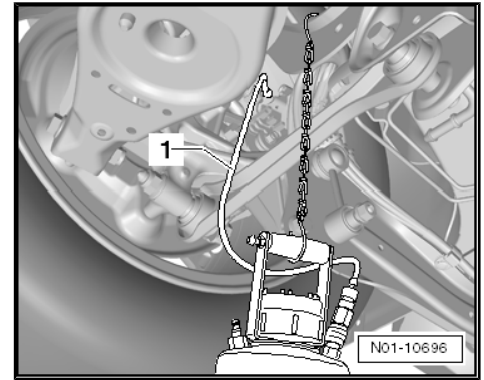
- Remove the cap -1- on the left rear brake caliper bleed valve.
- Mount the Brake-Bleeder Tool - VAS 5519- .







- Connect the collector bottle bleed hose -1- to the left rear bleed valve.
- Open the bleed valve and let the corresponding amount of brake fluid (see table) flow out. Close the bleed valve. Torque, refer to ➤ Brake Systems; Rep. Gr. 47 ; Diagnosis and Testing
- Install the cap on the left rear brake caliper bleed valve.
- Repeat the same procedure on the right rear side of the vehicle.



#### for manual transmission vehicles

Remove the air filter housing.

Procedure:

- Refer to ➤ Engine Mechanical, Fuel Injection and Glow Plug; Rep. Gr. 23 ; Removal and Installation → Diesel Direct Injection → Air Filter Assembly Overview

or

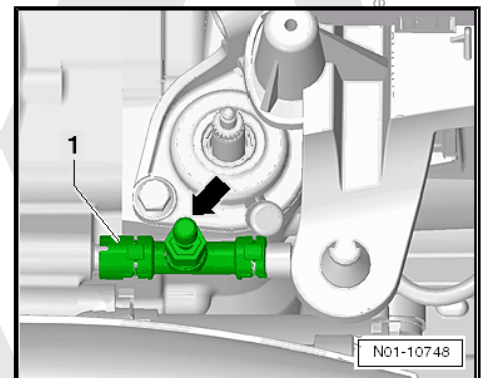
- Refer to ➤ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 24 ; Removal and Installation → Injection System → Air Filter, Removing and Installing.



#### Note

*For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually.*

- Attach the bleed hose to the bleed valve -arrow- on the clutch slave cylinder -1-.
- Open the valve and drain approximately 100 ml brake fluid.
- Close the valve and press the clutch pedal quickly 10 to 15 times.
- Open the valve again and drain approximately 50 ml brake fluid.
- Close the valve, remove the bleed hose and press the clutch pedal several times.
- Install the air filter housing in reverse order of removal.



#### Sequence/Brake Fluid Quantity

Sequence Bleed Valves:	Amount of brake fluid, which must flow out of the bleed valves:
Brake caliper	
left front	0.20 liter
right front	0.20 liter
Brake wheel cylinder/brake caliper	
Left rear	0.30 liter
Right rear	0.30 liter
Clutch slave cylinder	0.15 liter

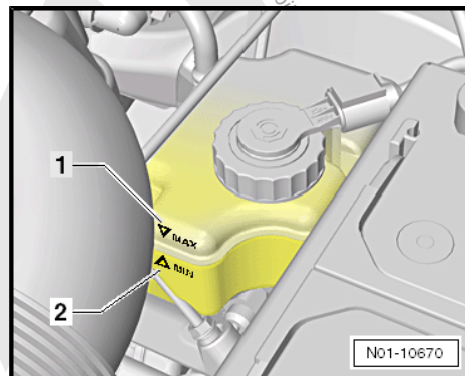
Total quantity: approximately 1.15 liters

- Move filler lever on Brake Charger/Bleeding Unit - VAS 5234- to "B" (see operating instructions).

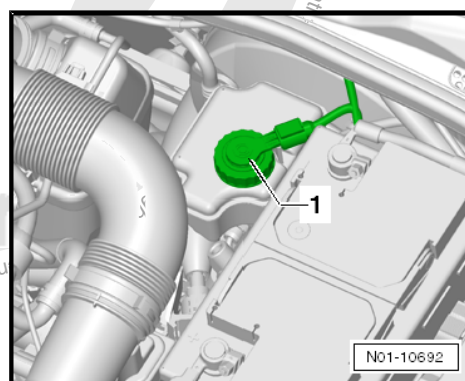




- Remove the filler hose from the adapter.
- Remove the adapter from the brake fluid reservoir.
- Check the brake fluid level and fill if necessary. It must be between -1- and -2-.



- Install the brake fluid reservoir cap -1-.
- Install the rear wheels, if necessary. Refer to [⇒ "2.38 Wheel Bolts, Tightening to Tightening Specification", page 147](#).
- Perform a function test during the test drive.



## 2.10 Brake System and Shock Absorber, Checking for Leaks and Damage

Check the following components for leaks and damage:

- ◆ Brake master cylinder
- ◆ Brake booster (on anti-lock braking system: hydraulic unit)
- ◆ Brake pressure regulator
- ◆ Brake calipers
- ◆ Shock absorber (only during Inspection)
- ◆ Make sure the dust caps are on the brake fluid bleed valves.
- Make sure the brake hoses are not twisted.
- Turn steering to left stop and to right stop. During this operation no brake hose must touch any vehicle components.
- Check brake hoses for porosity and cracks.
- Check brake hoses for chafing.
- Check the brake line connections for leaks and corrosion and make sure they are attached securely.



### WARNING

*Correct any malfunctions (repair procedure).*





## 2.11 Brake Fluid Level, Checking

⇒ **“2.11.1 Brake Fluid Level, Checking Procedure”, page 73**

### 2.11.1 Brake Fluid Level, Checking Procedure



#### WARNING

*If brake fluid level is below MIN mark -2-, check brake system (repair procedure), before adding brake fluid.*

#### Brake Fluid Level at the Delivery Inspection:

For the delivery inspection the fluid level must lie at the MAX. marking -1-.



#### Note

*To prevent the brake fluid from overflowing from the reservoir, the level must not be over the MAX mark.*

#### Brake Fluid Level at Inspection Service:

Brake fluid level must always be evaluated depending on brake pad wear.

During operation of the vehicle, the brakes are automatically readjusted depending on wear of the brake pads. Because of the adjustment, brake fluid level will be slightly lower as a result.

- Recommended brake fluid level when brake pad wear limit is nearly reached:

“At MIN-marking and slightly above it”, “NO TOPPING OFF REQUIRED”.

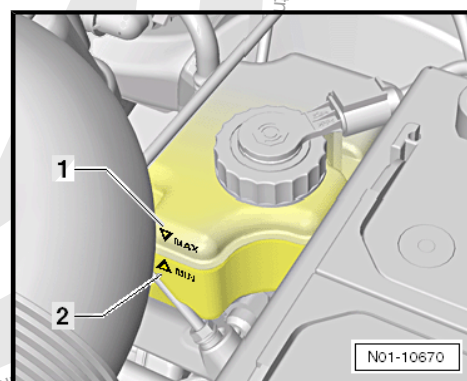
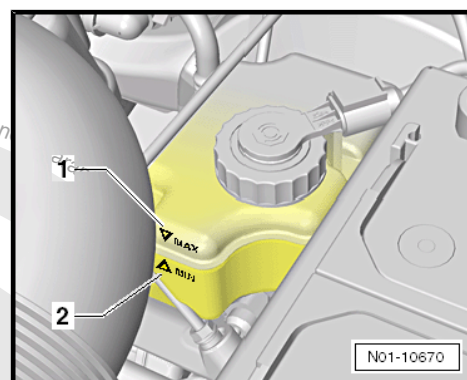
- Recommended brake fluid level when brake pads are new or are far removed from the brake pad wear limit:

“Between the MIN and MAX marks”.



#### WARNING

*If brake fluid level is below MIN mark , check brake system “repair procedure”, before adding brake fluid.*



## 2.12 6-Speed DSG transmission 02E, Changing Transmission Fluid and Filter

#### Procedure

Refer to ⇒ Direct Shift Gearbox; Rep. Gr. 34 ; General Information → Changing Transmission Fluid and Filter, Checking Transmission Fluid Level.





## 2.13 Brake Pad Thickness and Front and Rear Brake Rotor Condition, Checking

⇒ ["2.13.1 Front Disc Brake Pads", page 74](#)

⇒ ["2.13.2 Rear Disc Brake Pads", page 75](#)

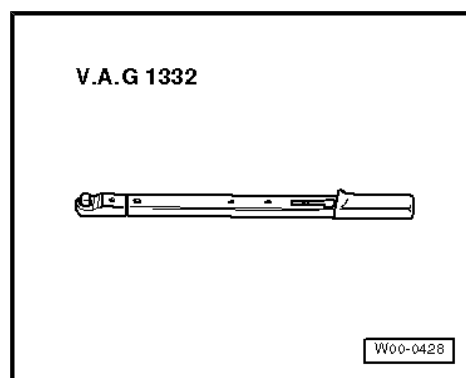
⇒ ["2.13.3 Brake Pad Thickness, Rear Drum Brake, Checking", page 76](#)

⇒ ["2.13.4 Brake Rotors, Checking", page 77](#)

### 2.13.1 Front Disc Brake Pads

Special tools and workshop equipment required

- ◆ Torque Wrench 40-200 Nm - V.A.G 1332-



- ◆ Flashlight and mirror

Perform the following:

The adapter for loosening and tightening of anti-theft wheel bolts is part of the vehicle tool kit. Refer to  
⇒ ["2.38 Wheel Bolts, Tightening to Tightening Specification", page 147](#).

- Use a mirror to determine the brake pad thickness. If necessary, remove the wheel where the brake pad wear display is installed.
- Pull off wheel bolt covers if necessary  
⇒ ["2.38 Wheel Bolts, Tightening to Tightening Specification", page 147](#).
- Mark the position of the wheel to the brake rotor.
- Remove wheel bolts and then the wheel.





- Measure thickness of inner and outer brake pad.

a - Pad thickness "without" backing plate

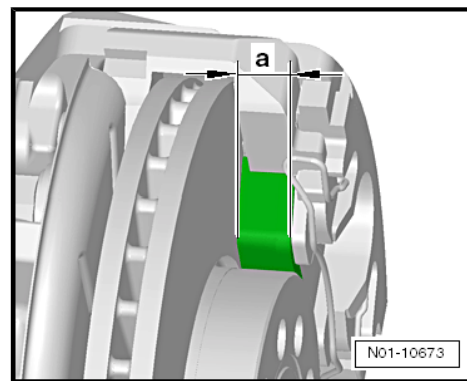
Wear limit: 2 mm

With pad thickness (not including backing plate) of 2 mm, the brake pads have reached their wear limit and must be replaced (repair procedure). Inform the customer!



#### Note

*When replacing brake pads, it is absolutely necessary to check brake rotors for wear! Checking and replacing the brake pads, if necessary, is a repair measure.*



- Check the brake rotor for wear:

#### Procedure

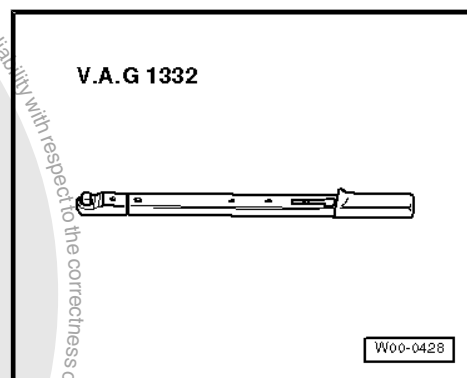
Refer to ➤ Brake Systems; Rep. Gr. 46 ; General Information

- Install the wheel in the marked position.
- Tighten the wheel bolts diagonally. For the correct tightening specification. Refer to  
➤ ["2.38 Wheel Bolts, Tightening to Tightening Specification", page 147](#) .
- Return the adapter to the vehicle tools.
- If necessary, install wheel bolt caps.

### 2.13.2 Rear Disc Brake Pads

#### Special tools and workshop equipment required

- ◆ Torque Wrench 40-200 Nm - V.A.G 1332-



- ◆ Flashlight and mirror

Perform the following:

The adapter for loosening and tightening of anti-theft wheel bolts is part of the vehicle tool kit. Refer to

➤ ["2.38 Wheel Bolts, Tightening to Tightening Specification", page 147](#)

- Point a flashlight through an opening in the wheel rim.





- Check thickness of outer pad visually.
- Shine a flashlight on the inner pad and hold up a mirror.
- Check thickness of inner pad visually.

a - Pad thickness inner and outer, not including backing plate

Wear limit: 2 mm

With pad thickness (not including backing plate) of 2 mm, the brake pads have reached their wear limit and must be replaced (repair procedure). Inform the customer!



#### Note

*When replacing brake pads, it is absolutely necessary to check brake rotors for wear! Checking and replacing the brake pads, if necessary, is a repair measure.*

- Check the brake rotor for wear:

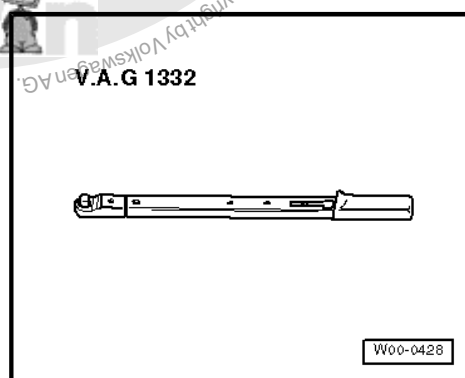
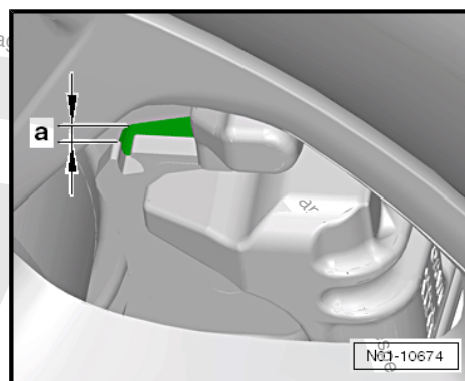
#### Procedure

Refer to ➔ Brake Systems; Rep. Gr. 46 ; General Information

### 2.13.3 Brake Pad Thickness, Rear Drum Brake, Checking

#### Special tools and workshop equipment required

- ◆ Torque Wrench 40-200 Nm - V.A.G 1332



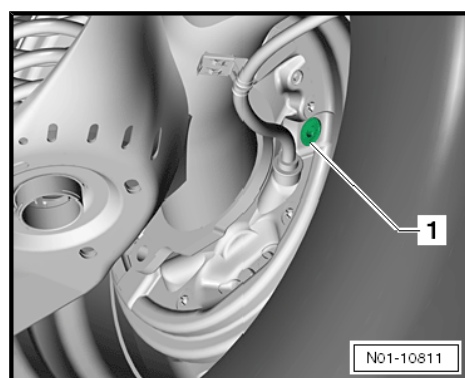
- ◆ Flashlight and mirror

Perform the following:

The adapter for loosening and tightening of anti-theft wheel bolts is part of the vehicle tool kit. Refer to

⇒ ["2.38 Wheel Bolts, Tightening to Tightening Specification", page 147](#) .

- Remove the plug -1-.







- Check the brake pad thickness on the drum brake -a- without the backing plate by looking through the check hole -2-. Use a flashlight to make it easier to see the brake pad.
- ◆ Wear limit: 2.5 mm
- Make sure there is no brake fluid or grease on the brake pads.

**i Note**

*At a thickness of 2.5 mm, brake pads have reached their wear limit and should be replaced (repair measure). Inform the customer!*

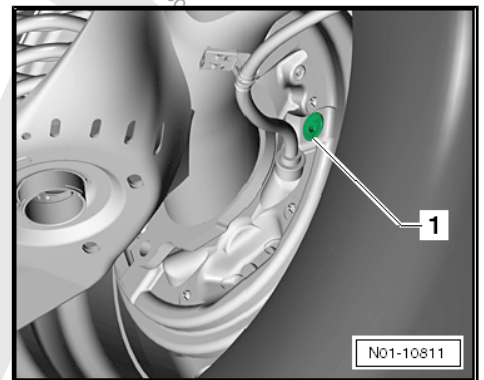
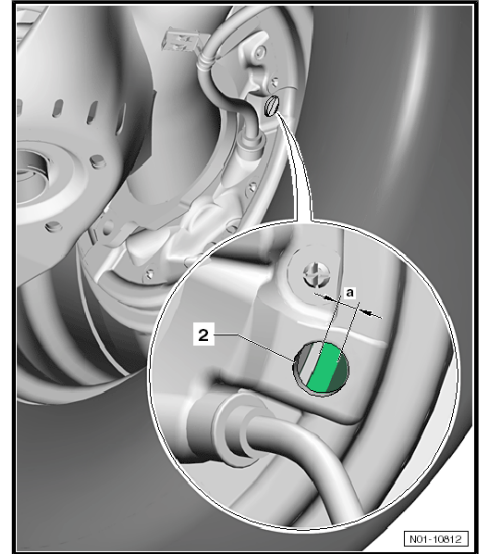
**Procedure**

Refer to ➔ Brake Systems; Rep. Gr. 46 ; General Information

**i Note**

*For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually.*

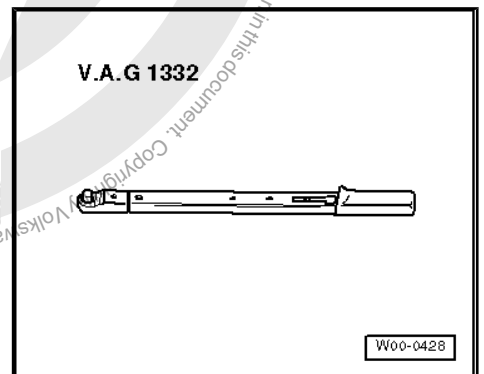
- Install the plug -1- when the check is completed.



## 2.13.4 Brake Rotors, Checking

### Special tools and workshop equipment required

- ◆ Torque Wrench 40-200 Nm - V.A.G 1332-



- ◆ Flashlight and mirror

Perform the following:

The adapter for loosening and tightening of anti-theft wheel bolts is part of the vehicle tool kit. Refer to ➔ ["2.38 Wheel Bolts, Tightening to Tightening Specification", page 147](#) .





Check all brake rotors for the following:

- ◆ Cracks
- ◆ Scoring
- ◆ Rust (no rust film)
- ◆ Wear on the brake rotor cup



#### Note

*Inform the customer if any damage is found on the brake rotor that looks like these illustrations. Replacing a brake rotor is a repair.*

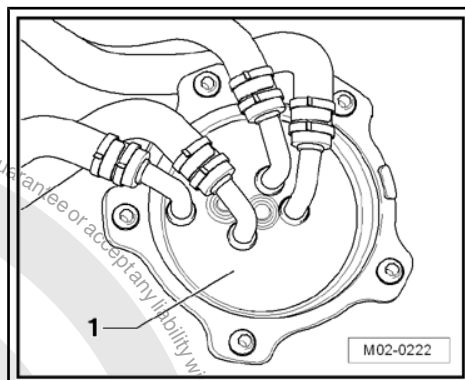
## 2.14 Diesel Fuel Filter, Replacing

⇒ ["2.14.1 General Information", page 78](#)

⇒ ["2.14.2 Fuel Filter, Replacing, Version 1", page 78](#)

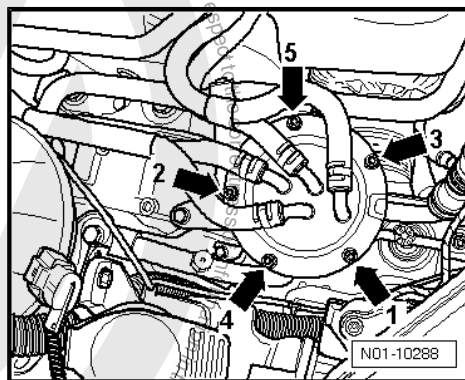
⇒ ["2.14.3 Fuel Filter, Replacing, Version 2", page 80](#)

### 2.14.1 General Information



#### Note

- ◆ There are two different fuel filter systems.
- ◆ System 1, work procedures. Refer to ["2.14.2 Fuel Filter, Replacing, Version 1", page 78](#).
- ◆ System 2, work procedures. Refer to ["2.14.3 Fuel Filter, Replacing, Version 2", page 80](#).



### 2.14.2 Fuel Filter, Replacing, Version 1



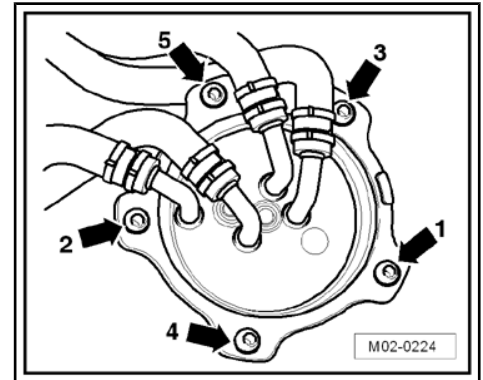
#### Note

- ◆ Make sure diesel fuel does not come in contact with the coolant hoses.
- ◆ Clean the hoses immediately, if necessary!
- ◆ Follow all disposal regulations.

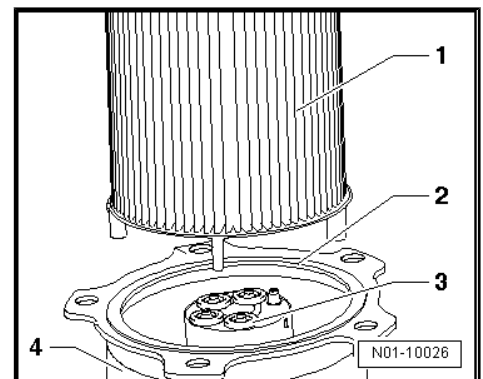




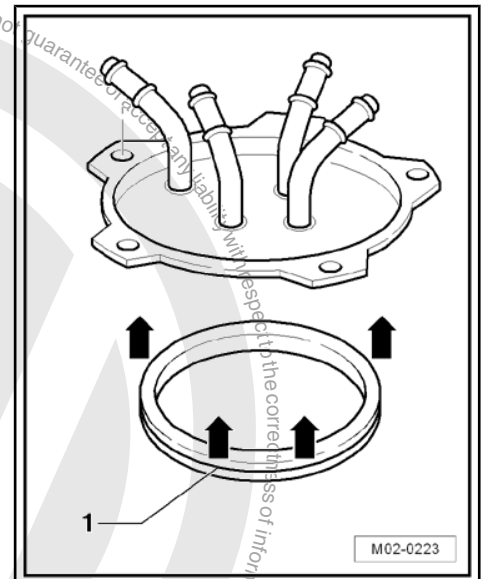
- Loosen all bolts -arrows- of the upper part of fuel filter in a diagonal sequence by approximately 1.5 to 2 turns.
- Remove the bolts and the fuel filter upper section.



- Remove the filter -1- and the gasket -2- from the fuel filter lower section -4-.
- Replace gasket --3-
- Install the new filter into the fuel filter lower section.

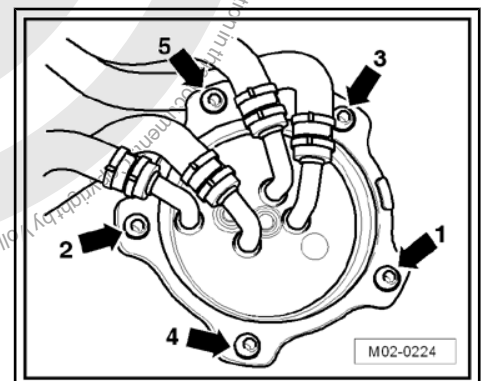


- Install a new seal -1- into the fuel filter upper section.
- Mount the fuel filter upper section and seal on the fuel filter lower section.



- Attach the fuel filter upper section to the fuel filter lower section.
- Tighten the bolts in the sequence shown in the illustration.
- Tighten bolts to a tightening torque of 5 Nm.

Following the tightening sequence will prevent the upper part of fuel filter from deforming and thereby damaging the gasket.



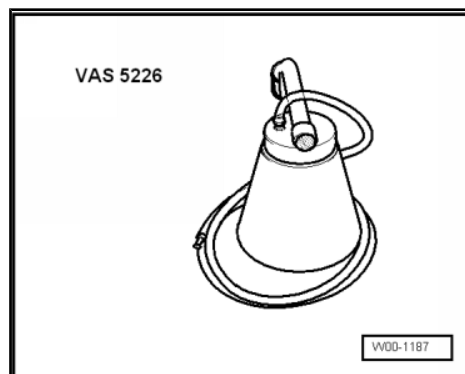




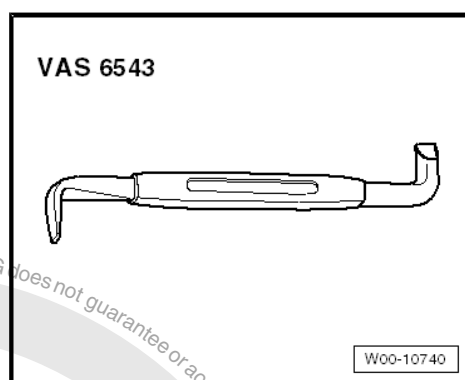
## 2.14.3 Fuel Filter, Replacing, Version 2

### Special tools and workshop equipment required

- ◆ Suction Pump - VAS 5226-



- ◆ Angled Screwdriver - VAS 6543-



Remove the engine cover. Refer to  
[⇒ "2.31 Upper Engine Cover, Removing and Installing",  
page 112](#).

### Removing



#### Caution

- ◆ **Do "NOT" remove the fuel hoses from the fuel filter cover and do "NOT" pry on the connections. This will cause leaks and damage to the fuel filter upper section.**
- ◆ **Make sure no diesel fuel gets on to other components in the engine compartment. Clean it off right away!**



#### Note

Follow all disposal regulations.

Perform the following:



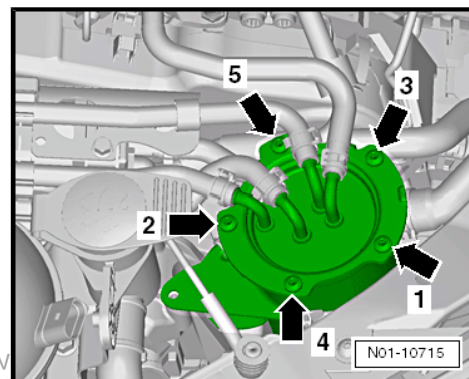


- Remove all the bolts -arrows- and the fuel filter upper section.



#### Note

*If the fuel filter upper section is stuck, loosen it as follows:*

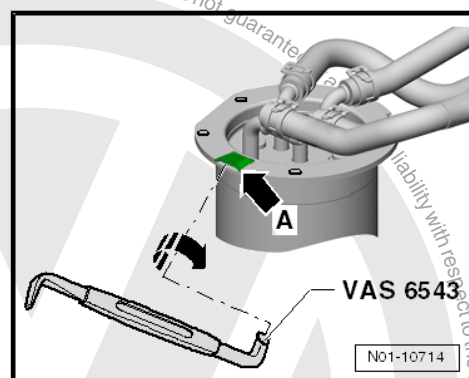


The fuel filter upper section can be lifted by the groove -arrow A- using the Angled Screwdriver - VAS 6543- .

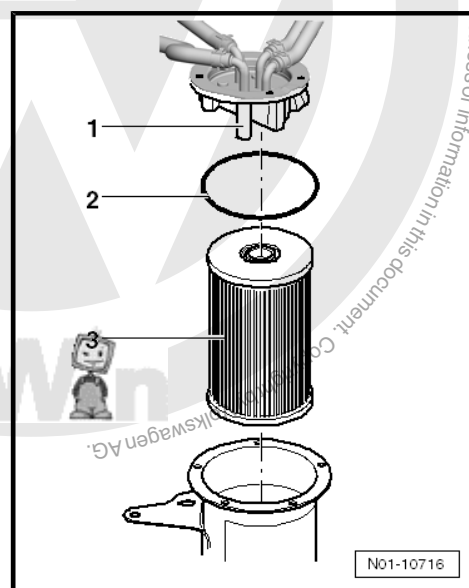
- ◆ The groove can be different sizes depending on the version of the upper section.

- Insert the Angled Screwdriver - VAS 6543- into the groove -arrow A- and turn the Angled Screwdriver - VAS 6543- .

This will lift the fuel filter upper section.



- Remove the filter -3- from the fuel filter lower section.







- Remove the old gasket -2- from the fuel filter upper section -1- by prying it out of the groove-arrow-.



**Caution**

**Remove all diesel fuel, dirt or water from the fuel filter lower section using the Diesel Extractor - VAS 5226- .**

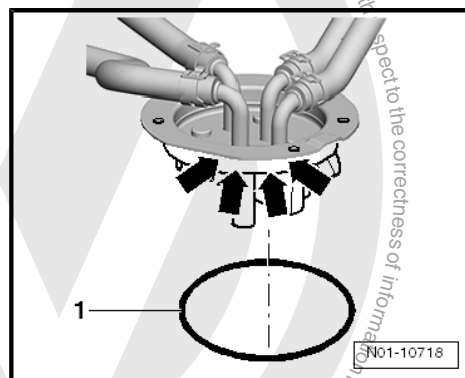
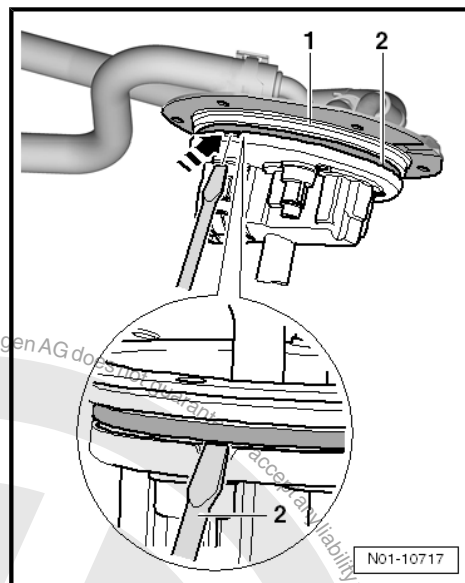


**Note**

*Follow all disposal regulations.*

**Installing**

- Install a new filter into the fuel filter lower section.
- Coat the new gasket-1- with a little diesel and install it into the fuel filter upper section -arrows-.







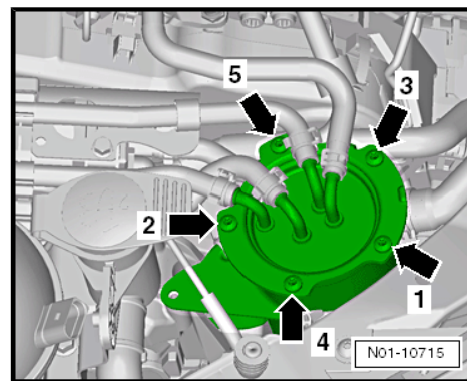
- Mount the fuel filter upper section and gasket onto the fuel filter lower section and press it on evenly until the two sections contact each other completely.



#### Caution

**Do "NOT" tighten the screws on the upper section until it completely contacts the lower section.**

- Install the bolts in to the fuel filter lower section and tighten them hand-tight.
- Then tighten the screws to 5 Nm according to the sequence shown in the illustration.



By following this sequence the gasket will not get damaged.

#### Bleeding the fuel system

Refer to ➤ Engine Mechanical, Fuel Injection and Glow Plug;  
Rep. Gr. 23 ; General Information .



#### Note

- ◆ *If there still is air in the fuel system, the engine may go into the emergency running mode during the road test. Shut off the engine and erase the DTC memory.*
- ◆ *For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually.*

## 2.15 Diesel Particulate Filter, Checking



#### Note

*When checking the diesel particulate filter, the ash load limit is requested.*

- Connect the diagnostic tester. Refer to [⇒ "1.6 Vehicle Diagnostic Tester, Connecting", page 15](#) .
- Switch on the ignition.
- Touch the **GUIDED FUNCTIONS** button/field on the screen.

If the displays indicated in the procedure are not shown on the display: Refer to the ➤ Operating instructions for Vehicle Diagnosis, Testing and Information System - 5051- or Vehicle Diagnosis, Testing and Information System - VAS 5052- .

- Press the ☐ button to confirm.
- Select the following one after the other:
  - ◆ Brand
  - ◆ Type
  - ◆ Model year
  - ◆ Engine code
- Confirm the VIN.

"Select vehicle system or function" is shown.





- Select “Engine” vehicle system.
- Select “Read measured value block”.
- Press the “>” button 2 times to confirm.

Follow instructions on the screen.

- Mark “measured values block 68, field 2” and read the ash load.
- Read the actual value using the “read button”.

Follow the instructions on the screen.

- End the test.
- Turn off the ignition and disconnect the diagnostic connector.

## 2.16 Power Windows, Checking



### Note

*After disconnecting and reconnecting the battery, the power window one-touch up/one-touch down feature does not work. Therefore, the electric windows must be positioned again immediately, before a new vehicle is delivered. The vehicle battery must not be disconnected after the electric windows have been positioned.*



### WARNING

*After disconnecting and reconnecting the battery, pinch protection of the power window regulators will not function. This can cause serious injuries if for example fingers are caught in the window!*

Perform the following to position the power windows:



### Note

*The following work sequence is for the front left window. The positioning for the remaining windows is performed by pressing/pulling the respective button in the driver door.*

- Switch on the ignition.
- Close all doors and windows.
- Hold left front side-window in position “Close” by pulling and holding switch for longer than 1 second.
- Pull the button again for 1 second. Now when the switch is pressed briefly, the window will lower fully and when the button is pulled briefly, the window will raise fully.
- Turn off ignition.

## 2.17 Hood, Lubricating Hook Golf Wagon from MY 2007, Golf Wagon from MY 2010, Jetta from MY 2005

Special tools and workshop equipment required

- ◆ Universal oil spray G 000 115 A2



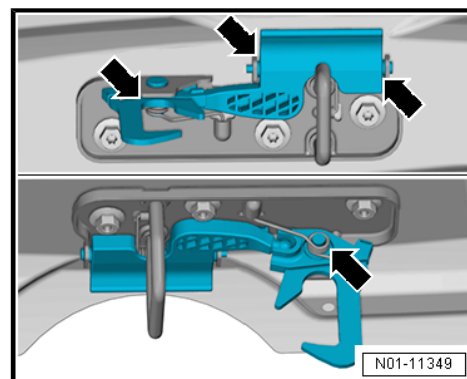


## Note

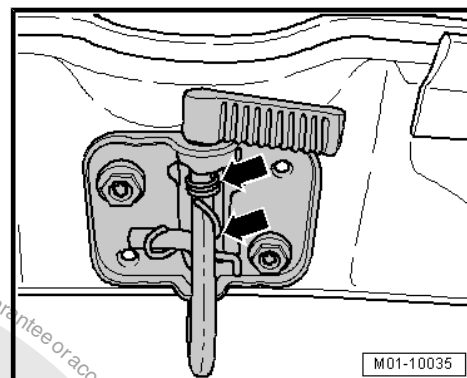
*Vehicle must be at least at room temperature.*

- Coat the hood safety catches with universal oil-Spray G 000 115 A2 at the marked positions -arrows-.

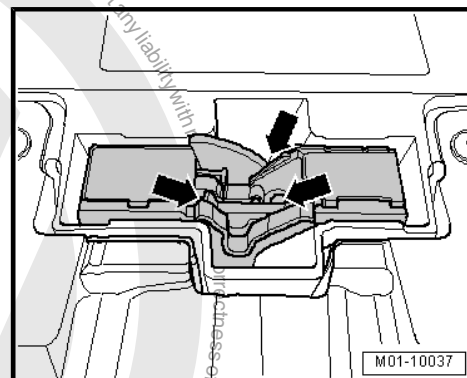
a)



b)



- Operate the moveable components several times to allow the universal oil to seep in.
- Remove any excess lubricant with a lint-free cloth.



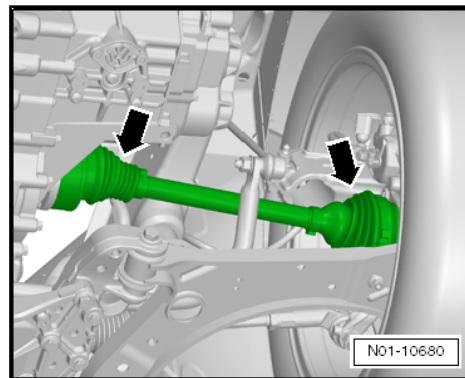




## 2.18 Protective Joint Boots, Visual Inspection

Perform the following:

- Check the outer and inner joint bellows -arrows- for leaks and damage.



## 2.19 Engine Cover Rubber Buffer, Removing and Installing

Only Jetta GTI Edition 30

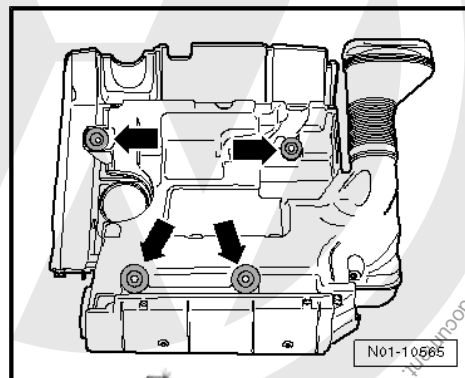


### Note

*The engine cover rubber buffers are replaced in conjunction with the air filter on the Jetta GTI Edition 30 every 60,000 km.*

- Remove the engine cover. Refer to  
⇒ ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).
- Lay the engine cover on a soft surface with the top side facing up to prevent damaging the chrome application.
- Remove the rubber buffer -arrows- from the engine cover.
- The press new rubber buffers back into their guides.

To install engine cover, reverse sequence used when removing it.





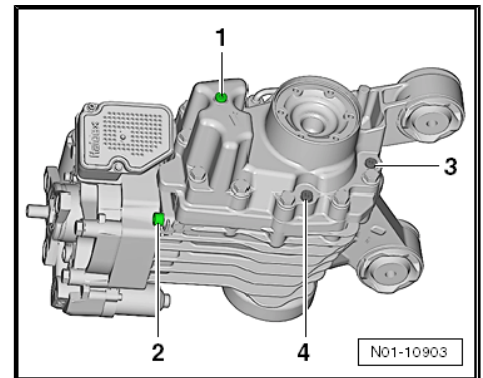


## 2.20 Haldex Clutch, Changing Oil



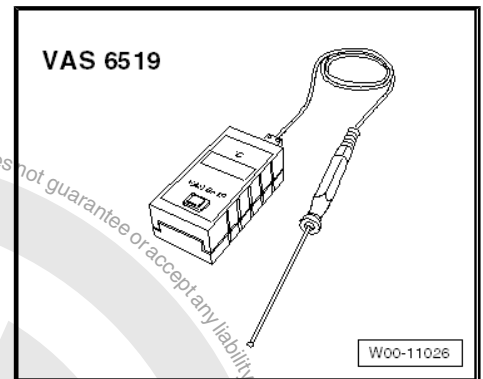
### Note

- ◆ On vehicles equipped with a Haldex clutch, the drain and sealing screws of both systems get interchanged due to the integrated housing. This results in unavoidable mistakes in maintenance and servicing, which can result in the Haldex clutch or the axle drive failing.
- ◆ The Haldex clutch and axle drive are a single unit with separate oil housings.
- ◆ -1- Plug for filler hole for the Haldex oil.
- ◆ -2- Drain plug for the Haldex oil.
- ◆ -3- Plug for the filler hole for the axle oil.
- ◆ -4- Drain plug for the axle oil.

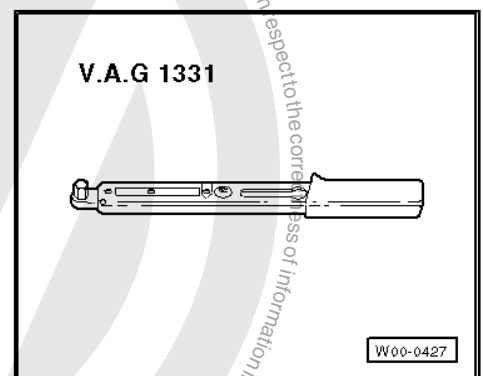


### Special tools and workshop equipment required

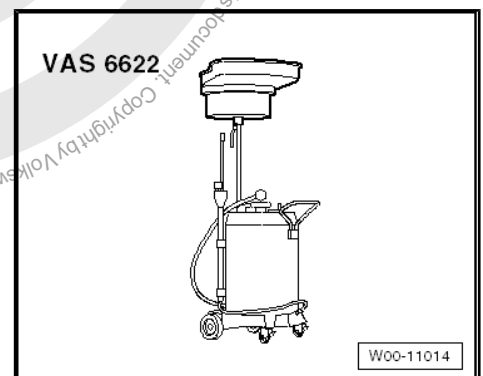
- ◆ Digital Thermometer - VAS 6519-



- ◆ Torque Wrench 5-50 Nm - V.A.G 1331-



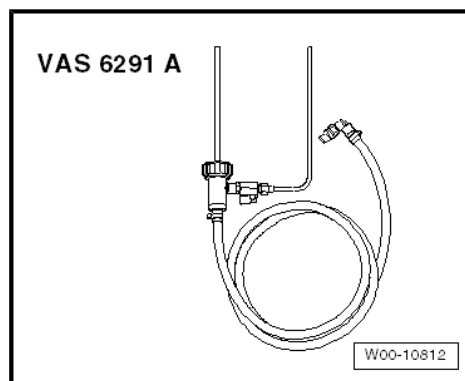
- ◆ Used Oil Collection and Extraction Unit - VAS 6622-



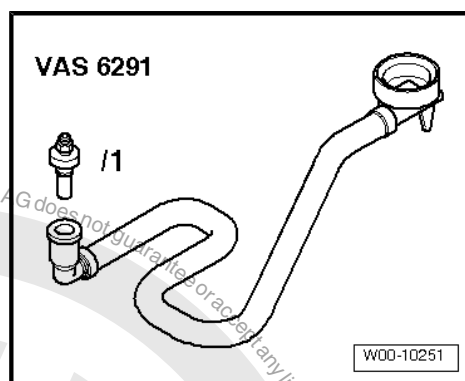




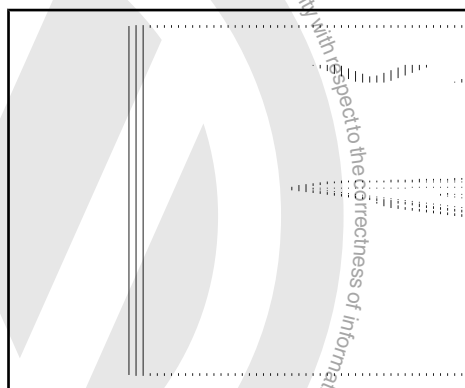
◆ Charging Device For Haldex Coupling 2 - VAS 6291 A-



◆ Oil Filling Adapter - VAS 6291/1-

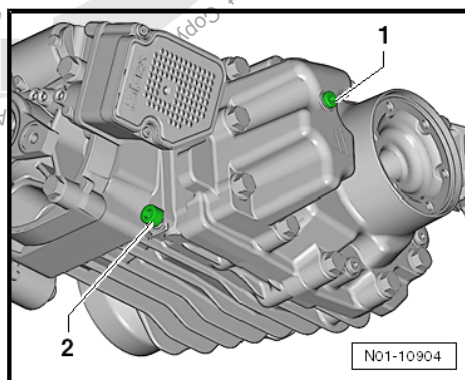


◆ Shop Crane - Drip Tray - VAS 6208-



**Oil draining:**

- Raise vehicle with lift and position Used Oil Collection and Extraction Unit - SMN372500- under Haldex clutch.
- Remove oil drain plug -2- and drain high-performance oil completely.
- Install a new oil drain plug with a new sealing ring and tighten to the tightening specification. The oil drain plug has a permanent seal.



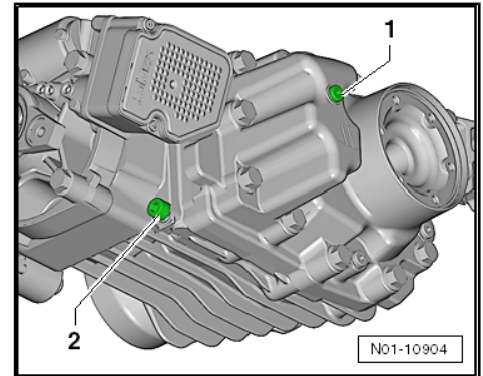
Tightening specification	Nm
Oil drain plug	30



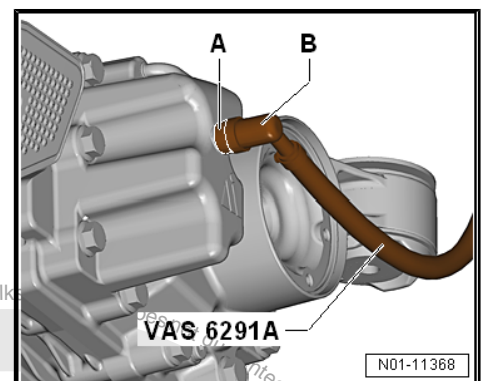


## Filling

- Remove oil filler plug -1-.



- Disconnect elbow -B- from adapter -A- and completely install adapter in oil filler opening.
- Position elbow again and route hose over driveshaft to prevent it from hanging down.
- Place the Shop Crane - Drip Tray - VAS 6208- under the final drive.
- After hose is routed above left rear wheel and away from vehicle, you can drain vehicle.

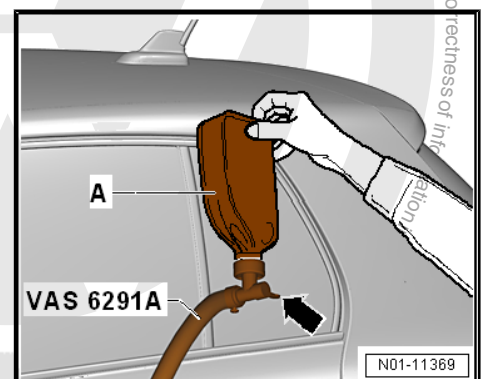


### Note

- ◆ The oil temperature when checking the oil level is 68° and 104 °F (20 °C to 40 °C).
- ◆ Pay attention to the temperature of the oil container when filling.
- ◆ The oil temperature can be measured using the Digital Thermometer - VAS 6519- .

**Oil capacities, oil specifications, refer to ⇒ Fluid Capacity Tables; Rep. Gr. 03 .**

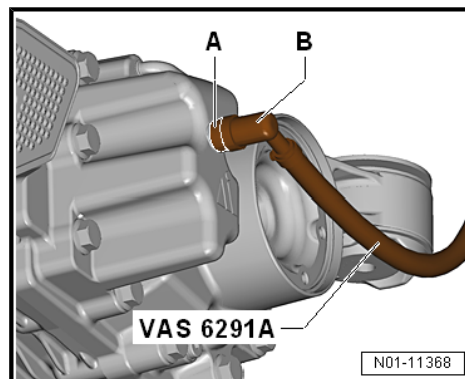
- Screw oil container -A- with valve closed -arrow- onto Charging Device F/Held 2 Coup. -VAS 6291 A- .
- Open valve -arrow- and hold oil container as shown in illustration.
- with the Charging Device For Haldex Coupling 2 - VAS 6291 A- fill with oil until flows out between the adapter and the transmission housing.
- Remove the Charging Device For Haldex Coupling 2 - VAS 6291 A- .
- Remove the adapter -A-.



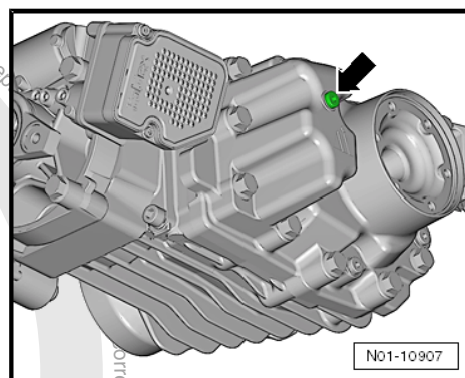




- If necessary let the excess flow out until it only drips.  
The oil level is correct when the oil drips out of the oil fill hole.



- Install a new oil filter plug -arrow- with a permanent seal and tighten to the tightening specification.



Tightening specification	Nm
Oil filler plug	15

Check the specified temperature range while checking the oil level, if while filling an oil temperature between 68° and 104 °F (20 °C to 40 °C) cannot be guaranteed.

The oil temperature can be measured using the Digital Thermometer - VAS 6519.

If the oil temperature is not between 68° and 104° F (20...40 °C), either drive the vehicle to warm it up or let the oil temperature cool down.

## 2.21 Hybrid Components, Checking for Damage to High Voltage Components and Cables



### WARNING

*Hybrid vehicles have a high voltage system with very high voltage. Danger of electrical shock! Check for high voltage components in the area where you will be working before starting. Follow the General Warnings. Refer to ➔ Hybrid Electric System; Rep. Gr. 93 ; General Information .*





#### WARNING

- ◆ *All work on vehicles with a high voltage system may be performed only by technicians "certified on electrical systems".*
- ◆ *Contact to the responsible high voltage technician is something needs clarification.*

#### Procedure: Perform visual check

When performing a visual inspection inside the engine compartment, be sure to inspect the electric drive power and control electronics, the high voltage cables for the battery and the A/C compressor and the high voltage cable for the hybrid module.

When performing the visual inspection in the back of the vehicle, be sure to inspect the hybrid battery, the high voltage cables for the battery and the electric box with the service plug.

When performing the visual inspection, pay attention to the following:

- ◆ The high voltage components must not show any damage on the outside.
- ◆ The insulation on the high voltage cable must be intact without any damage.
- ◆ Look for any unusual deformations on the high voltage cable.



#### Note

*Inform the high voltage technician if something seems wrong or missing.*

## 2.22 Inner and Outer Body, Checking for Corrosion on Open Doors and Lids

#### Test Locations

- ◆ Sunroof frame
- ◆ Inner and outer door frame
- ◆ The area around the trim strips
- ◆ Windshield roof edge
- ◆ Outer and inner A-pillar
- ◆ Hood
- ◆ Wheel housings
- ◆ Inner and outer rear lid

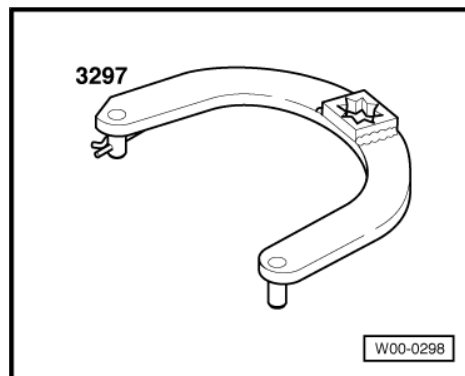
## 2.23 Ribbed Belt, Tension, Adjusting, Engines without Automatic Tensioner

Special tools and workshop equipment required





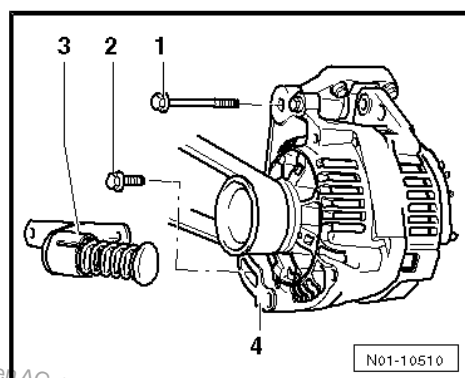
◆ Tensioning Lever - 3297-



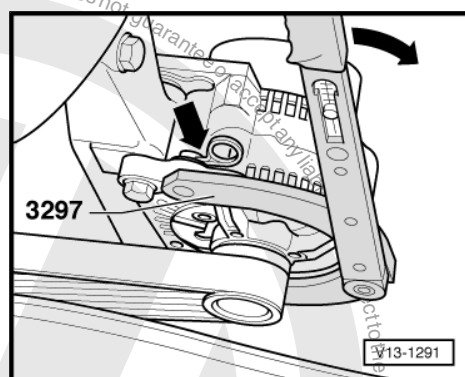
– Loosen the bolts -1 + 2-

3 - Clamp

4 - Generator



- Insert clamping lever, secure with pin -arrow- and tip generator down (use e.g. torque wrench as drive for 3297).
- Press generator as far as clamp stop at least three times using clamping lever to ensure optimum ease of movement.
- Tighten first the lower, then the upper generator bolt to 25 Nm.



## 2.24 Ribbed Belt, Checking

Perform the following:

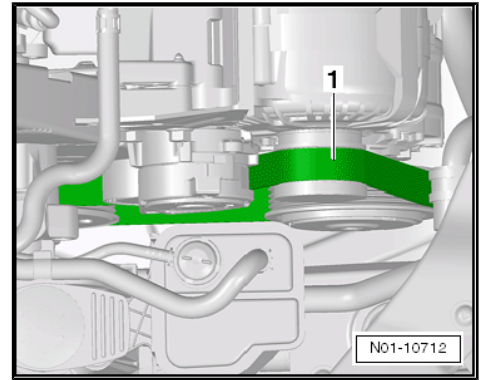
- Turn the engine by the vibration damper/belt pulley using a socket.





Check ribbed belt -1- for:

- ◆ Sub-surface cracks (cracks, core ruptures, cross sectional breaks)
- ◆ Separation (cover layer, belt cords)
- ◆ Breaks at lower layer
- ◆ Fraying of cords
- ◆ Wear at flanks (material wear, frayed flanks, hardening or glazing of flanks, surface cracks)
- ◆ Oil or grease contamination



#### Caution

- *Replace the belt if any damage is found.*
- *This will prevent any belt malfunctions.*
- *Replacing the belt is a repair procedure.*

## 2.25 Instrument Panel Insert, Adapting language of menus

⇒ ["2.25.1 Accessing the Main Menu on Vehicles Without a Multi-Function Steering Wheel", page 93](#)

⇒ ["2.25.2 Accessing the Main Menu on Vehicles with a Multi-Function Steering Wheel, Version 1", page 94](#)

⇒ ["2.25.3 Accessing the Main Menu on Vehicles with a Multi-Function Steering Wheel, Version 2", page 94](#)

### 2.25.1 Accessing the Main Menu on Vehicles Without a Multi-Function Steering Wheel



#### Note

*The vehicle electronics and optional equipment determine which menus will be shown in the display.*

- Switch on the ignition.

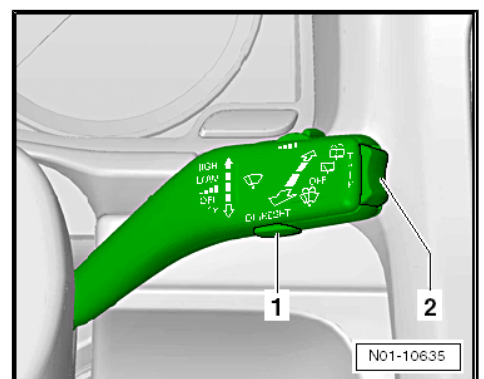
An outline of a vehicle appears.

- Press the button -1- in the windshield wiper lever one time
- To move back out of another menu into the main menu, hold the rocker switch -2- depressed for two seconds.

This procedure might have to be repeated until the main menu appears.

#### 2. Bring up the menu "Settings"

- Press the top or the bottom of the rocker switch -2- to highlight a point on the menu.







The marked menu item will be between the two horizontal lines.  
There is also a small triangle on the right side.

- Highlight "settings".
- Press the button -1- in the windshield wiper lever.

The menu "Settings" is brought up.

The following will appear in "settings":

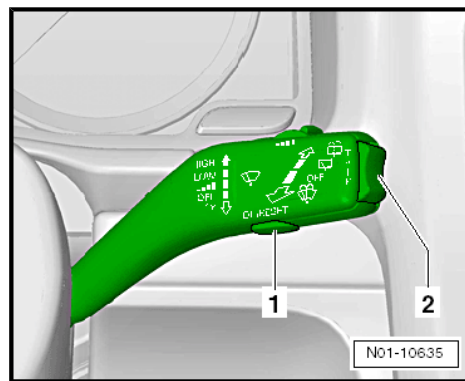
- 1 - Settings for Time
- 2 - Speed Warning for Winter Tires
- 3 - Units
- 4 - Language
- 5 - Parking Heater
- 6 - Light & View and Comfort

### 3. Bring up the menu "Language"

- Select language and press the button -1- to confirm.

Several languages are displayed in the menu.

Select the language and press the button -1- to confirm.

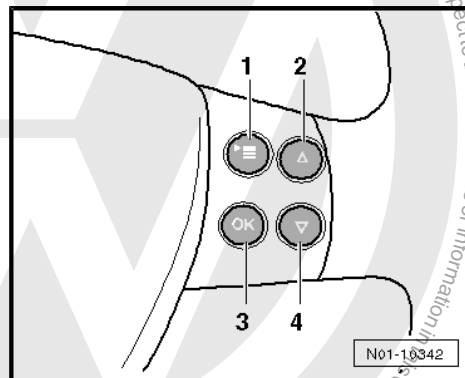


## 2.25.2 Accessing the Main Menu on Vehicles with a Multi-Function Steering Wheel, Version 1

- Switch on the ignition.

An outline of a vehicle appears.

- Press the button -3- until the "Settings" menu appears.
- Press the button -4- and select "Language".
- Confirm with button -3-.
- Select the language.
- Confirm with button -3-.
- Exit the menu with the button -1-.



## 2.25.3 Accessing the Main Menu on Vehicles with a Multi-Function Steering Wheel, Version 2

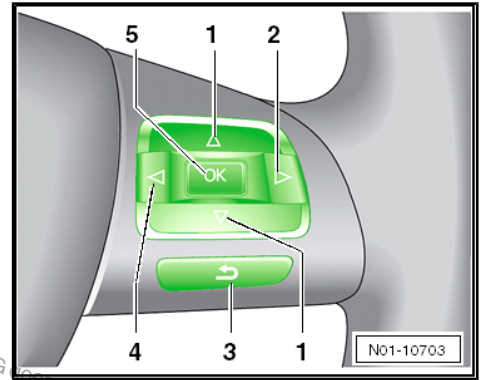
- Switch on the ignition.

An outline of a vehicle appears.





- Press the button -5- to access the main menu.
- Press the buttons -2- or -4- until the “settings” menu appears.
- Press the button -5-.
- Select the language with button -1-.
- Confirm with button -5-.
- Exit the menu with the button -3-.



## 2.26 Compass, Setting Compass Zone and Calibrating Compass

⇒ [“2.26.1 General Information”, page 95](#)

⇒ [“2.26.2 Compass Zone, Setting”, page 96](#)

⇒ [“2.26.3 Compass, Calibrating”, page 98](#)

### 2.26.1 General Information



#### Note

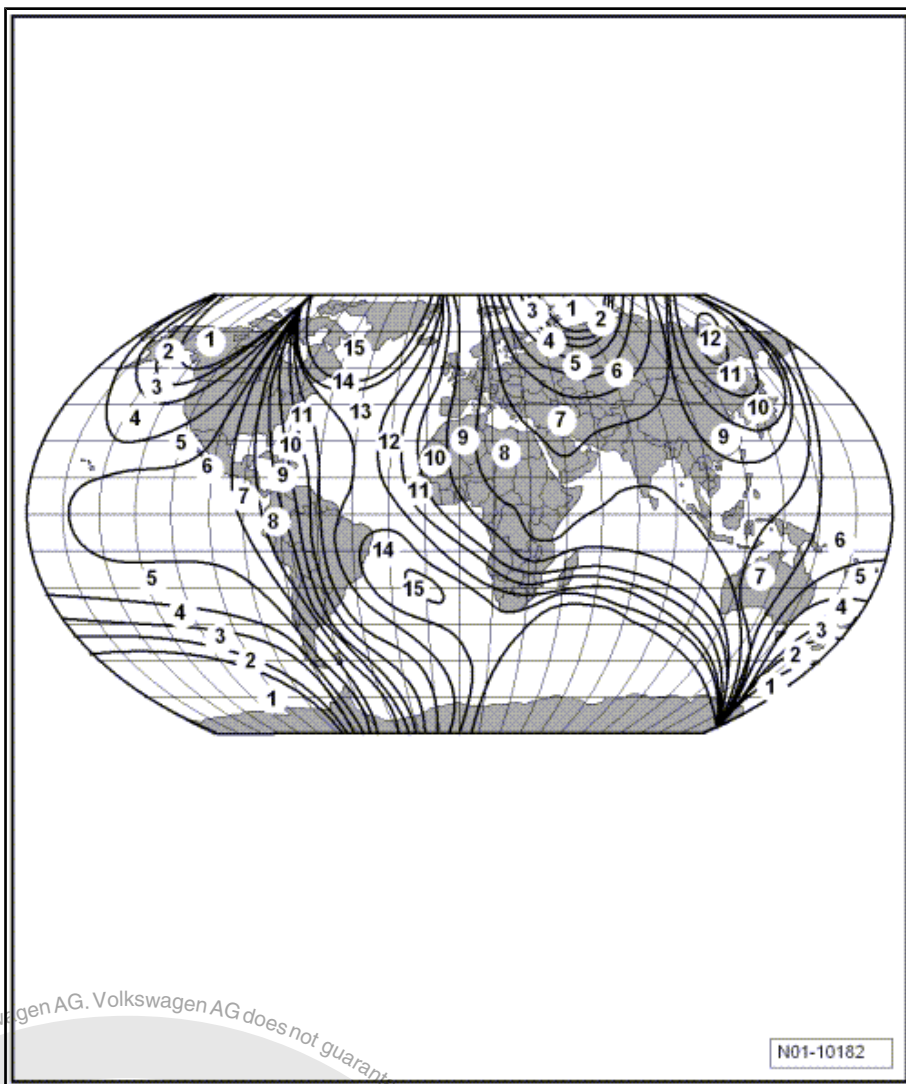
*Only applies for vehicles with Highline instrument cluster!*

The compass indicates the direction vehicle is facing.

For a correct reading, the correct compass zone must be adjusted.

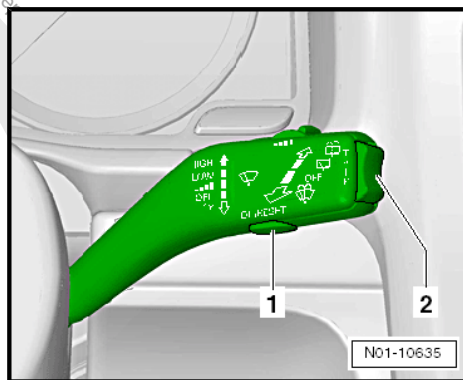
- Determine your geographic area, referring to the zone map, e.g. zone 8 for Germany, zone 6 for Mexico, etc.





Setting the compass zone and calibrating the compass is performed in the "main menu", using the button -1- and the rocker switch -2- of the windshield wiper stalk.

- ◆ Button -1- confirms the menu items.
- ◆ Use the rocker switch -2- to switch from one menu to another.



## 2.26.2 Compass Zone, Setting

### 1. Bring up the main menu

- Switch on the ignition.





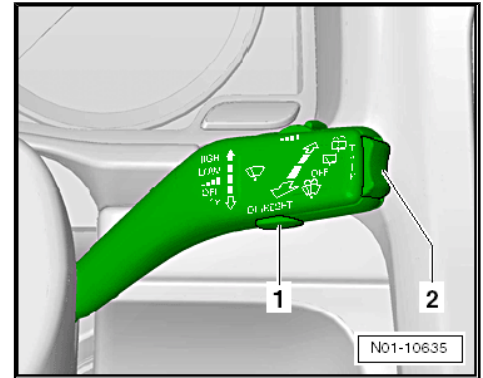
An outline of a vehicle appears.

- Press the button -1- in the windshield wiper lever one time.
- To move back out of another menu into the main menu, hold the rocker switch -2- depressed for two seconds.

This procedure might have to be repeated until the main menu appears.

## 2. Bring up the menu “Settings”

- Press the top or the bottom of the rocker switch to highlight a point on the menu.



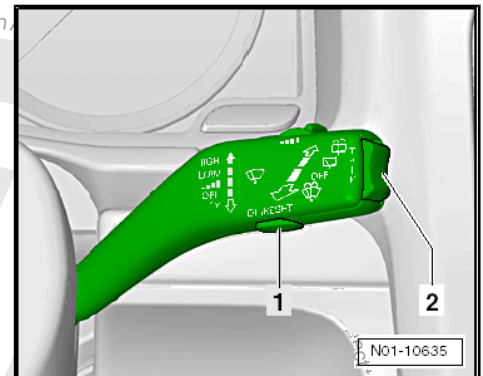
The marked menu item will be between the two horizontal lines. There is also a small triangle on the right side.

- Highlight “settings”.
- Press the button -1- in the windshield wiper lever.

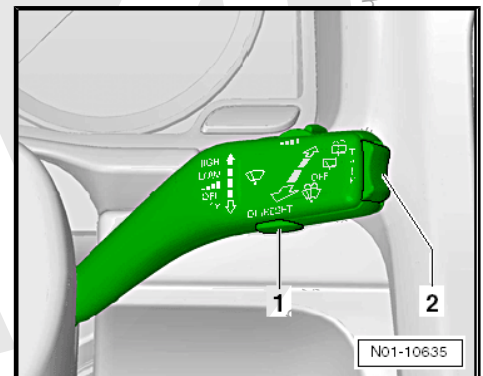
The menu “Settings” is brought up.

## 3. Bring up the menu “Comfort”

- Highlight “Comfort” with the rocker switch -2-.



The menu “Comfort” is brought up.



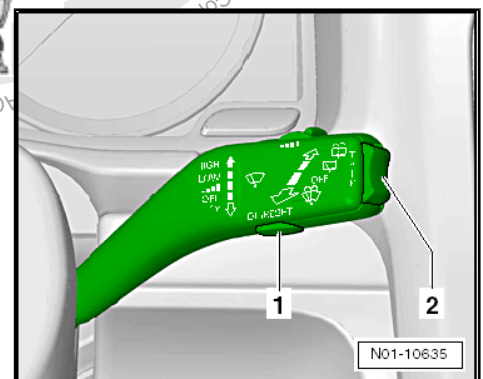
## 4. Bring up the menu “Compass”

- Highlight “compass” with the rocker switch -2-.

The menu “Compass” is brought up.

The following will appear in “compass”:

- 1 - Direction
- 2 - Zone
- 3 - Calibration
- 4 - Back





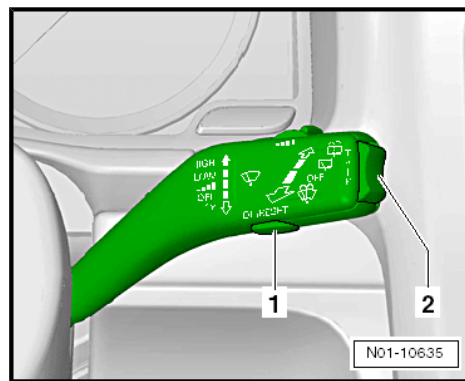


### 5. Bring up the menu "Zone"

Select "zone" and press the button -1- to confirm.

The following will appear in "compass":

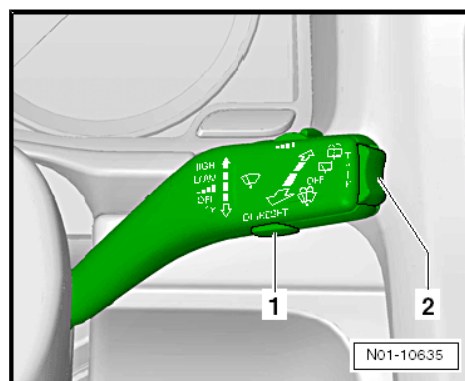
- 1 - Direction
  - 2 - The zone (e.g. zone 8 for Germany, zone 6 for Mexico)
  - 3 - (+1 Zone ) the ability, to set 1 zone higher
  - 4 - (-1 Zone ) the ability, to set 1 zone lower
  - 5 - Back
- Highlight "+ 1 zone" or "- 1 zone" with the rocker switch. Press the button -1- to maximize or minimize the compass zone appearing in the display.



### 6. Exit the menu

- Highlight "back" with the rocker switch -2-.
- Press the button -1-.

The menu for "Compass" is exited and the last displayed menu is brought up.



## 2.26.3 Compass, Calibrating

### 1. Bring up the main menu

- Switch on the ignition.

An outline of a vehicle appears

- Press the button -1- in the windshield wiper lever one time.
- To move back out of another menu into the main menu, hold the rocker switch -2- depressed for two seconds.

This procedure might have to be repeated until the main menu appears.

### 2. Bring up the menu "Settings"

- Press the top or the bottom of the rocker switch to highlight a point on the menu.

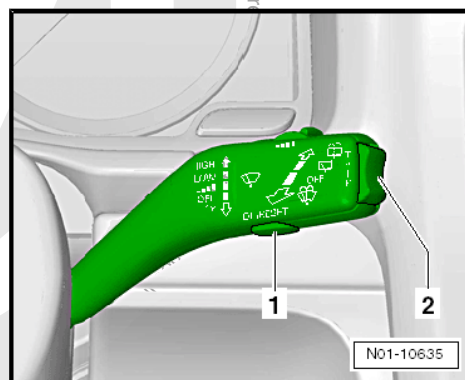
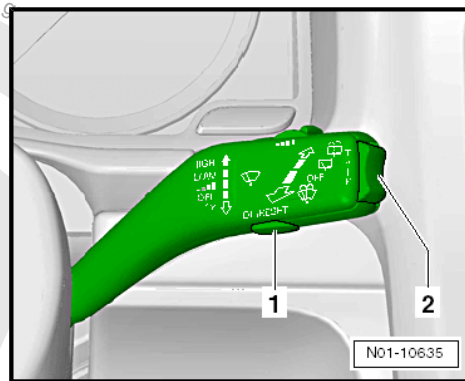
The marked menu item will be between the two horizontal lines. There is also a small triangle on the right side.

- Highlight "settings".
- Press the button -1- in the windshield wiper lever.

The menu "Settings" is brought up.

### 3. Bring up the menu "Comfort"

- Highlight "Comfort" with the rocker switch -2-.







The menu "Comfort" is brought up.

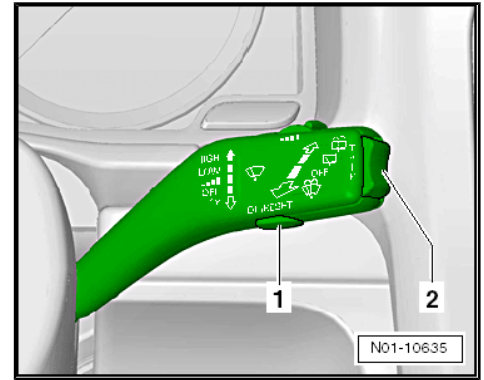
#### 4. Bring up the menu "Compass"

- Highlight "compass" with the rocker switch -2-.

The menu "Compass" is brought up.

The following will appear in "compass":

- 1 - Direction
- 2 - Zone
- 3 - Calibration
- 4 - Back



#### 5. Bring up the menu "Calibration"

Select calibration and press the button -1- to confirm.

The following will appear in "calibration":

- 1 - To calibrate, a full circle must be driven
- 2 - Calibrating
- 3 - Back

#### 6. Bring up the menu "Calibrating"

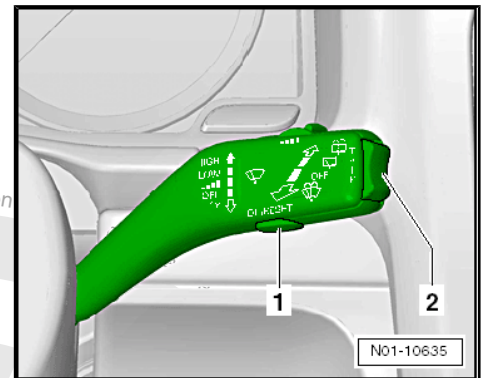
Select calibrate and press the button -1- to confirm.

The following will appear in "calibrate":

- 1 - Driving in a full circle
  - Press the button -1-.
  - Drive in a full circle at a speed of less than 10 mph (20 km/h).

"CAL" is indicated at the top in the display, next to the arrow for direction.

After completing the calibration, the indication "CAL" is replaced by the actual direction (e.g. "N" for North).



## 2.27 Coolant System, Check freeze protection and coolant level

⇒ ["2.27.1 Freeze Protection, Checking and Adding Coolant Additive", page 99](#)

⇒ ["2.27.2 Coolant Level, Checking and Adding Coolant Additive", page 101](#)

⇒ ["2.27.3 Mixture Ratio", page 102](#)

### 2.27.1 Freeze Protection, Checking and Adding Coolant Additive



#### Caution

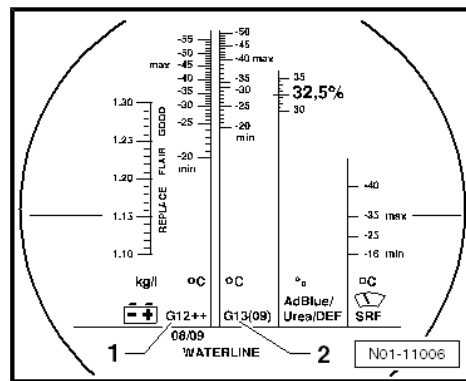
*Use only distilled water for mixing coolant additives. Optimum corrosion protection can be reached only by using distilled water.*





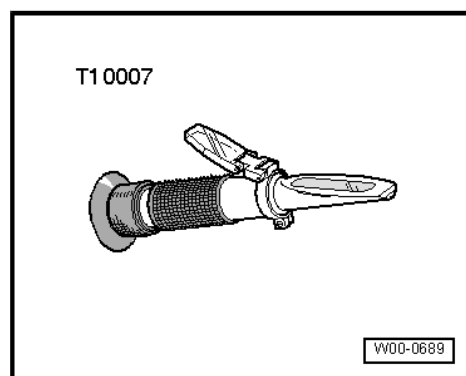
## Note

- ◆ The water used for mixing greatly influences the effectiveness of the coolant. Do to the different water contents which can vary due to country or region, the water quality used is defined. Distilled water fulfills all the requirements. For this reason mix coolant with distilled water when supplementing and refilling the cooling system.
- ◆ Use only coolant additives from the Electronic Parts Catalog (ETKA). Using other coolant additives can impair the corrosion protectant. Loss of coolant can cause considerable damage to the engine.
- ◆ Coolant in the correct mixing ratio prevents freezing and corrosion damage as well as scaling. The boiling point is also increased. For these reasons the cooling system must have coolant additive the whole year.
- ◆ Especially in countries with tropical climates or when vehicle is driven under heavy load, the coolant improves the engine reliability by its increased boiling point.
- ◆ Refractometer - T10007A- MUST be used to determine the actual freeze protection.
- ◆ The freeze protection must be set to  $-13^{\circ}\text{F}$  ( $-25^{\circ}\text{C}$ ), for countries with an arctic climate, it must be set to  $-33^{\circ}\text{F}$  ( $-36^{\circ}\text{C}$ ). The freeze protection can be increased only when a stronger freeze protection is required due to climatic conditions. The freeze protection can be set only down to  $-55^{\circ}\text{F}$  ( $-48^{\circ}\text{C}$ ), otherwise the cooling effect of the coolant will be impaired.
- ◆ The coolant concentration must not be reduced by adding water, even during the warmer season. The freeze protection must be a minimum of  $-13^{\circ}\text{F}$  ( $-25^{\circ}\text{C}$ ).
- ◆ Read off the freeze protection value on the scale for each re-filled coolant additive.
- ◆ The temperature on the Refractometer - T10007A- corresponds to the crystallization point. At this temperature, the first flakes of ice begin to form.
- ◆ Do not re-use used coolant.
- ◆ Use only water/coolant additive as lubricant for the coolant hoses.



## Special tools and workshop equipment required

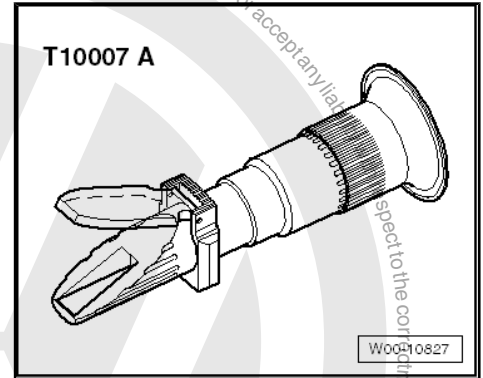
- ◆ Refractometer - T10007- or







◆ Refractometer - T10007 A-



**Note**

*Read the bright/dark boundary to obtain an accurate reading for the following tests. Place a drop of water on the glass to improve the readability of the bright/dark boundary. The bright/dark boundary can be clearly recognized on the "WATERLINE".*

- Check the concentration of the coolant additive using the refractometer - T10007- (read the Operating Instructions) or refractometer - T10007 A- (read the Operating Instructions).

The refractometer scale -1- applies to coolant additives G 11; G 12; G 12+ and G 12++.

The scale -2- is designed only for coolant additive G13.

- Drain some of the coolant and add coolant additive according to the mixture ratio if the freeze protection is inadequate. Refer to ["2.27.2 Coolant Level, Checking and Adding Coolant Additive", page 101](#).



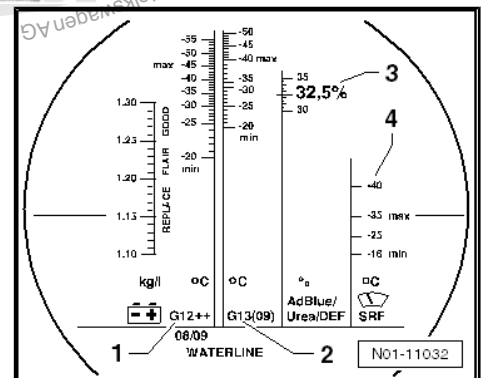
**Note**

- ◆ *The freeze protection must be ensured down to approximately -13° F (-25 °C)..*
- ◆ *If you cannot clearly determine which coolant additive is in the coolant system, use the scale -2- for coolant additive G13.*
- ◆ *Follow all disposal regulations.*

- Check the freeze protection after the road test.

## 2.27.2 Coolant Level, Checking and Adding Coolant Additive

- Check the coolant level in the reservoir when the engine is cold.





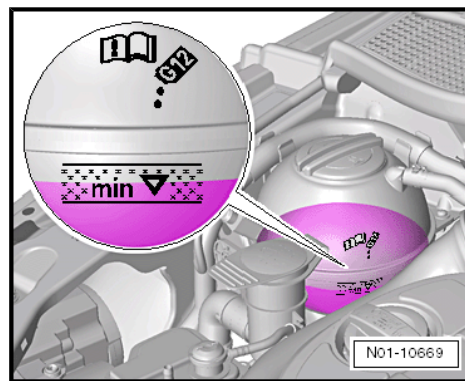


- ◆ Delivery Inspection: Coolant level above the “MIN marking” -arrow-.
- ◆ Inspection service: Coolant level above the “MIN marking” -arrow-.
- If coolant level is too low, fill with coolant mixture.



#### Note

Determine cause of fluid loss, which cannot be attributed to normal use and repair.



## 2.27.3 Mixture Ratio



#### Caution

*Use distilled water for mixing. Tap water or well water does not have the necessary quality to assure the functionality of the coolant.*

Freeze protection to	Coolant additive ratio	Water. Refer to <sup>11)</sup> .
-13 °F (-25 °C)	approximately 40 %	approximately 60 %
-31 °F (-35 °C)	approximately 50 %	approximately 50 %
-40 °F (-40 °C)	approximately 60 %	approximately 40 %

<sup>11)</sup> Use distilled water only.

## 2.28 Air Filter, Cleaning Housing and Removing and Installing Filter

⇒ “2.28.1 Air Filter, Removing and Installing, 1.4L TSI Hybrid Engines”, page 102

⇒ “2.28.2 Air Filter, 2.5L SRE Gasoline, Removing and Installing”, page 104

⇒ “2.28.3 Air Filter, 2.0L FSI and 2.0L SRE Gasoline, Removing and Installing”, page 107

⇒ “2.28.4 Air Filter, 2.0L TFSI, Removing and Installing”, page 107

⇒ “2.28.5 Air Filter, Removing and Installing, Diesel, 1.4L TSI Engine (103 kW, 118 kW and 125 kW) and 2.0L TSI Engine (155 kW)”, page 109

⇒ “2.28.6 Air Filter, Removing and Installing, 1.8L TSI Engines”, page 110

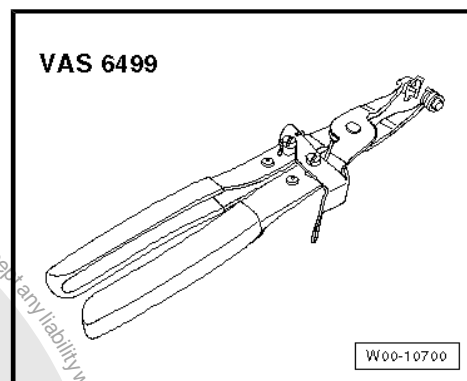
### 2.28.1 Air Filter, Removing and Installing, 1.4L TSI Hybrid Engines

Special tools and workshop equipment required

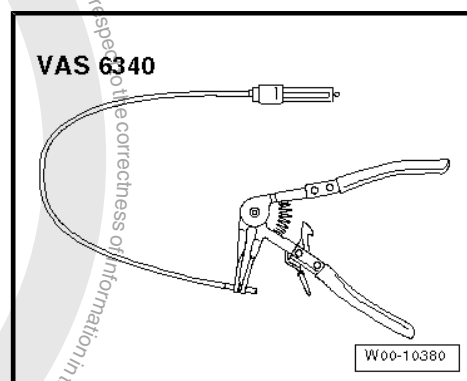




◆ Spring Clip Pliers - VAS 6499-

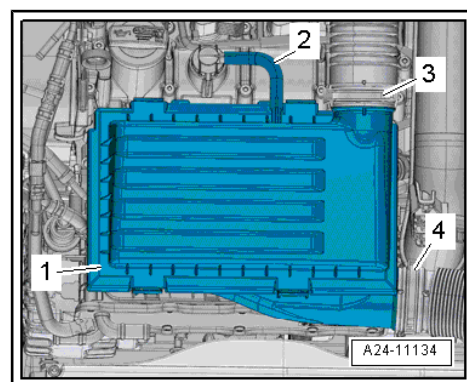


◆ Hose Clip Pliers - VAS 6340-



**Removing**

- Remove the upper engine cover. Refer to ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).
- Remove the air guide hose -2- from the air filter housing upper section -1-.
- Loosen the spring clamps -3- and -4-. Use Hose Clip Pliers - VAS 6499- or Hose Clip Pliers - VAS 6340-.
- Pull the air filter housing -1- off the ball pins.
- Remove the air guides from the air filter housing -1-.
- Remove the air filter housing -1- and lay it down turned 180°.



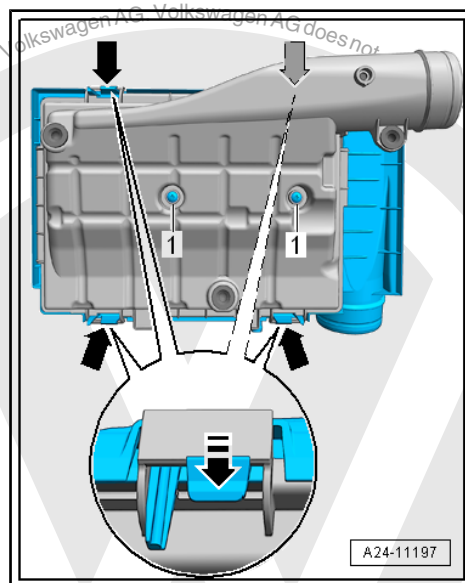




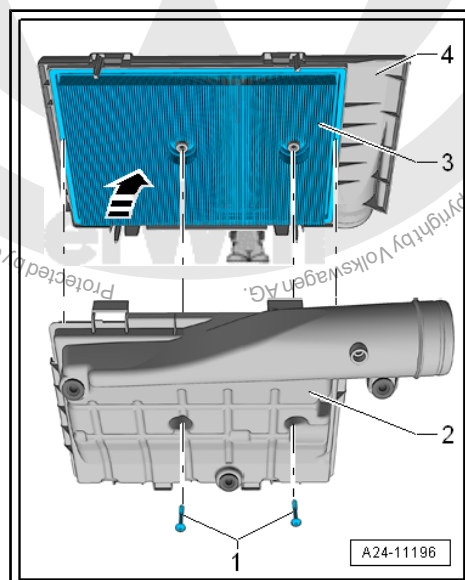
- Remove the screws -1- from the air filter housing lower section.
- Open the straps -arrows- on the air filter housing upper section one after the other (danger of breaking).air filter housing lower section
- Remove the air filter housing lower section and the air filter.

#### Installing

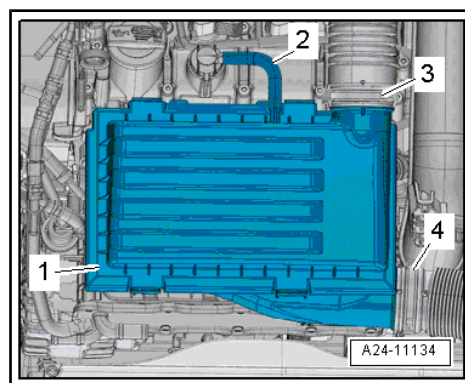
- Check the air filter housing, mass airflow sensor and water drains. Make sure they are not dirty or blocked.



- Install the air filter -3- centered in the air filter housing upper section -4-.
- Place the air filter housing lower section -2- on the air filter housing upper section -4- and tighten the screws -1-.



- Mount the air guides on the air filter housing -1-.
- Close the spring clamps -3- and -4-. Use Hose Clip Pliers - VAS 6499- or Hose Clip Pliers - VAS 6340- .
- Press the air filter housing -1- centered on the ball pins.
- Attach the air guide hose -2- to the air filter housing upper section -1-.
- Install the upper engine cover. Refer to [⇒ "2.31 Upper Engine Cover, Removing and Installing", page 112](#) .



## 2.28.2 Air Filter, 2.5L SRE Gasoline, Removing and Installing

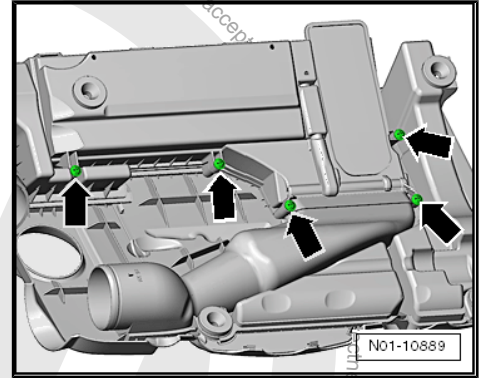
### Removing

- Remove the upper engine cover. Refer to [⇒ "2.31 Upper Engine Cover, Removing and Installing", page 112](#) .

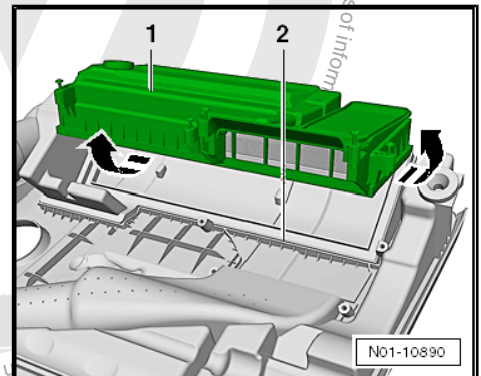




- Lay the engine cover on a soft surface with the top side facing up to prevent damaging the housing.



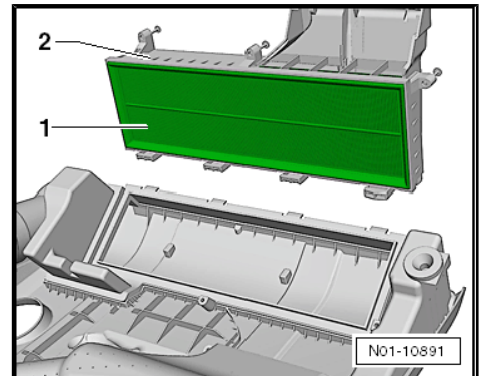
- Remove the bolts -arrows- on the underside of the engine cover.



- Remove the air filter housing lower section -1- in direction of arrow.
- Remove the air filter -1- from the air filter housing lower section -2-.
- Blow out air filter housing with compressed air if necessary.

#### Installing

- Insert the air filter -1- into the air filter housing lower section -2-.



#### Note

*Make sure the sealing surfaces on the air filter housing fit correctly.*



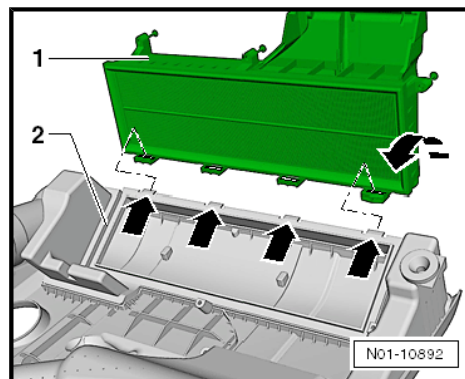
#### Note

- ◆ *Self-locking bolts are equipped for fastening the air filter housing upper section to the air filter housing lower section as well as the intake supports. If these bolts are loosened or tightened with a drill motor, the threads in the air filter housing upper section can be damaged.*
- ◆ *For this reason, a drill motor may only be used when the following prerequisites are met:*
- ◆ *Drill motor RPM: maximum 200.*
- ◆ *The torque must be adjustable to max. 2 Nm.*



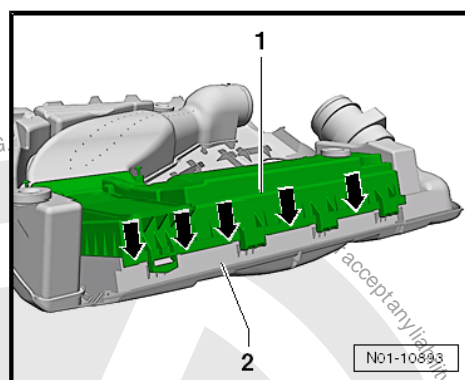


- Hook lower part of air filter housing -1- onto retaining tabs -arrows- of upper part of air filter housing -2-, pivot in direction of arrow, and then lightly press on.

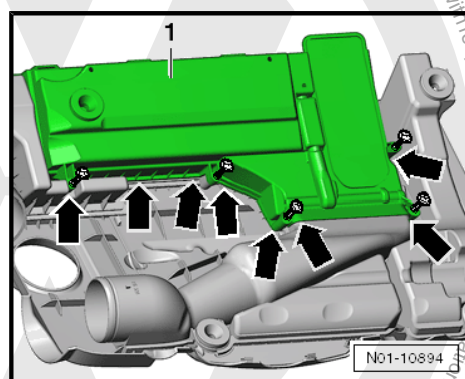


**Check the fit of housing halves -1- and -2- (rear part):**

- Both housing halves must fit together flush, -arrows-.



**Check the fit of housing halves -1- and -2- (front part):**



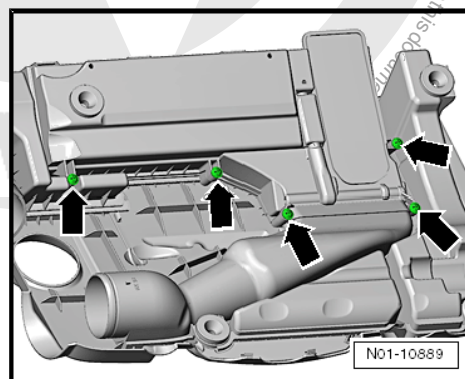
- Both housing halves must fit together flush, -arrows-.
- Tighten the screws -arrows- to maximum 2 Nm.



**Note**

*Tighten the bolts alternately and uniformly to prevent both housing halves from distorting.*

- Install engine cover. Refer to  
⇒ ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).

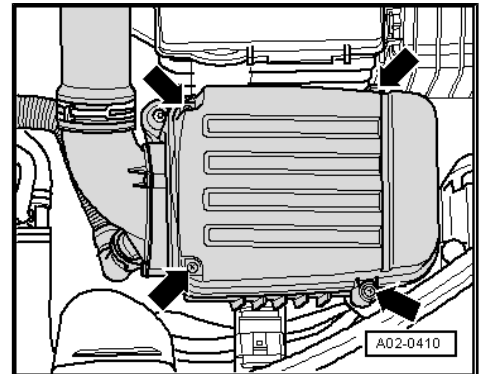






### 2.28.3 Air Filter, 2.0L FSI and 2.0L SRE Gasoline, Removing and Installing

- Remove the 4 bolts -arrows- and cover.



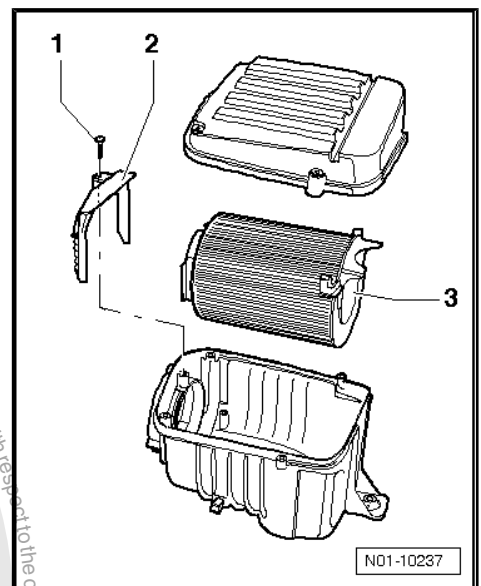
- Remove the bracket -2-.
- Remove the old filter -3-.



#### Note

Follow all disposal regulations.

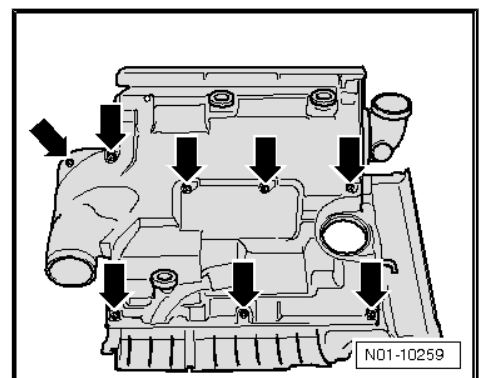
- Clean the filter housing and install the new air filter.
- Tighten bolt -1- of bracket to 2 Nm and bolts of cover to 3 Nm.



### 2.28.4 Air Filter, 2.0L TFSI, Removing and Installing

#### Removing

- Remove the engine cover. Refer to ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).
- Place engine cover with upper side on a soft surface to prevent damage to the chrome.
- Remove the bolts -arrows- on the underside of the engine cover.







- Separate lower part of air filter housing -1- from upper part -3-.
- Remove the air filter -2- from the air filter housing lower section -1-.

### Installing



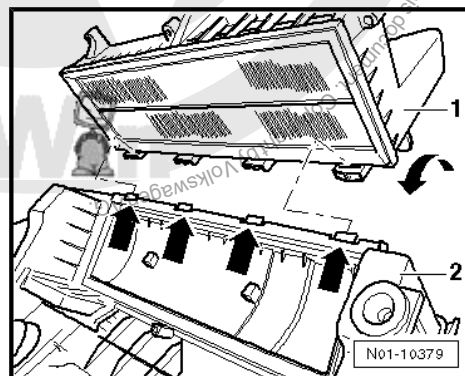
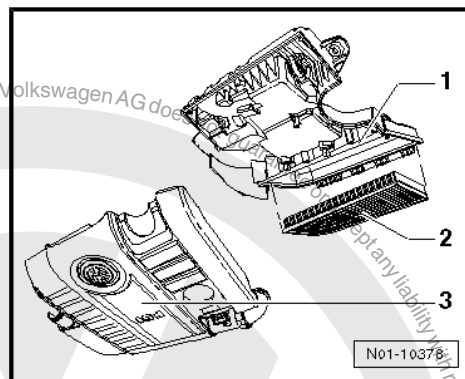
#### Note

- ◆ *Self-locking bolts are equipped for fastening the upper part of the air filter housing to the lower part of air filter housing as well as the intake supports. If these bolts are loosened or tightened using a drill motor, the threads in the upper part of air filter housing can be damaged.*
- ◆ *For this reason, a drill motor may only be used when the following prerequisites are met:*
- ◆ *The drill motor RPM is max. 200 / min.*
- ◆ *The torque must be adjustable to max. 3 Nm.*

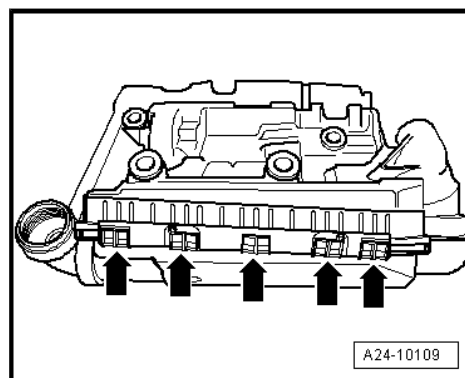
On the GTI Edition 30, the engine cover rubber buffers must be replaced

⇒ ["2.19 Engine Cover Rubber Buffer, Removing and Installing", page 86](#).

- Engage upper part of air filter housing -1- on retaining tabs -arrows- on upper part of air filter housing -2- and pivot in direction of arrow, then lightly press on.



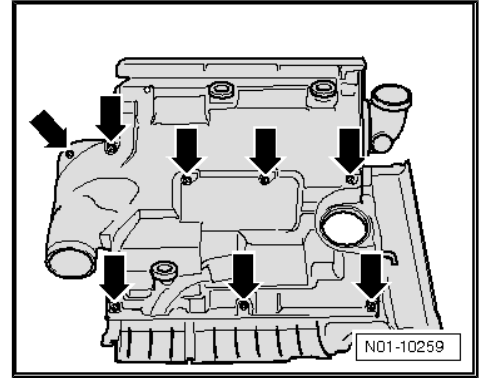
- Both housing halves must fit together flush, -arrows-.







- Tighten the bolts -arrows- to maximum 3 Nm.



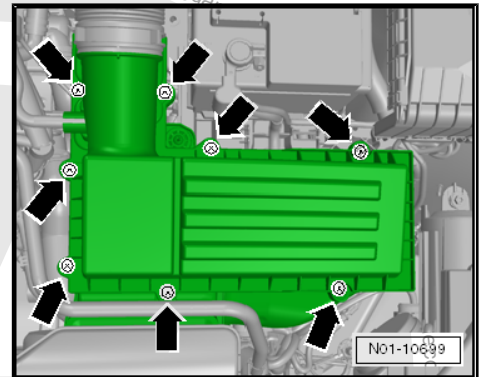
### 2.28.5 Air Filter, Removing and Installing, Diesel, 1.4L TSI Engine (103 kW, 118 kW and 125 kW) and 2.0L TSI Engine (155 kW)

- Remove the bolts -arrows-.
- Remove the vacuum hose from the air filter housing.



#### Caution

*To avoid damage to connections and vacuum hose, do not use any sharp-edged tools to remove hose.*



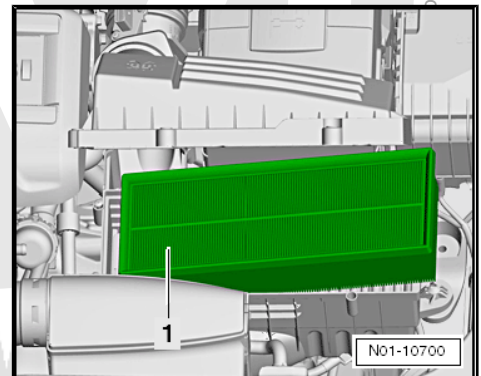
- Remove the air filter housing upper section and take out the air filter -1-.



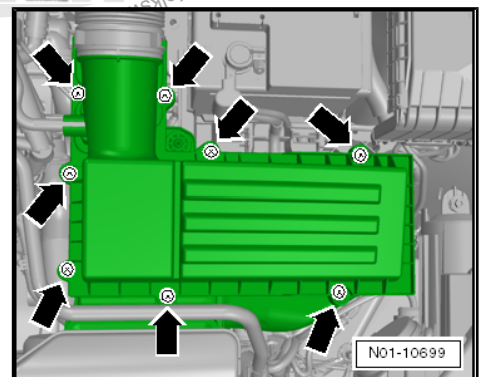
#### Note

*Follow all disposal regulations.*

- Clean the air filter housing lower section.
- Install a new air filter and attach the air filter housing upper section.



- Tighten the screws -arrows- to 1.6 Nm.







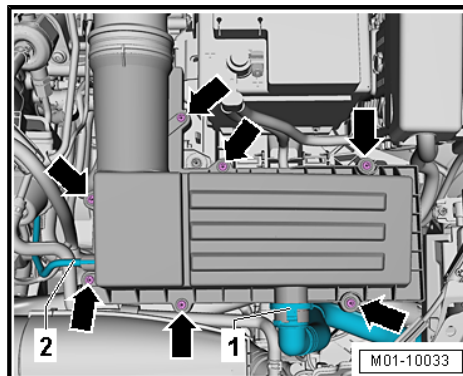
## 2.28.6 Air Filter, Removing and Installing, 1.8L TSI Engines

- Unlock and remove the secondary air line -1-.
- Remove vacuum hose -2-.
- Remove the bolts -arrows-.



### Caution

*To avoid damage to connections and vacuum hose, do not use any sharp-edged tools to remove hose.*



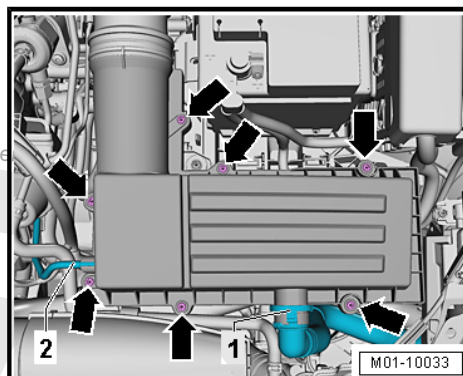
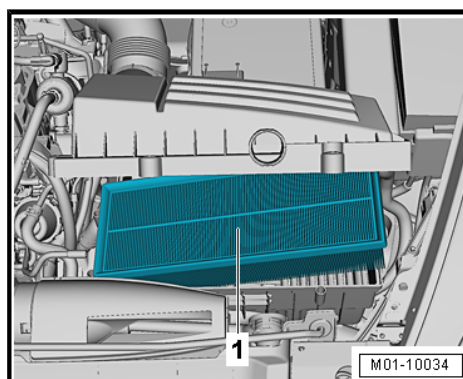
- Remove the air filter housing upper section and take out the air filter -1-.



### Note

*Follow all disposal regulations.*

- Clean the air filter housing lower section.
- Install a new air filter and attach the air filter housing upper section.
- Tighten the screws -arrows- to 1.5 Nm.
- Connect the vacuum hose -2-.
- Connect the secondary air line -1-.



## 2.29 Memory Seat, Initializing

All memories and assignments are deleted during initialization. The memory buttons can then be re-programmed and a remote control key assigned.

- Open the driver door.
- Move the backrest all the way forward.
- Once the backrest is all the way forward, release the switch and press it again until the gong signal sounds after a few seconds.

## 2.30 Engine and Engine Compartment Components, Checking for Leaks and Damage From Top to Bottom

- Remove the engine cover if necessary. Refer to ["2.31 Upper Engine Cover, Removing and Installing", page 112](#) :





Perform visual check as follows:

- Check engine and components in engine compartment for leaks and damage.
- Check the lines, hoses and connections on the following systems:
  - ◆ Fuel system
  - ◆ Heating and ventilation system
  - ◆ Lubrication system
  - ◆ A/C system
  - ◆ Air intake system
  - ◆ Brake system

for leaks, abrasions, porosity and brittleness.



#### Note

- ◆ *Make sure the all malfunctions detected are rectified within repair measures.*
- ◆ *Determine the cause of fluid loss, which cannot be attributed to normal use and repair.*





## 2.31 Upper Engine Cover, Removing and Installing

⇒ [“2.31.1 Engine Cover, Removing and Installing, 1.4L TSI Hybrid Engines”, page 112](#)

⇒ [“2.31.2 Engine Cover, 1.8L TSI and 2.0L TSI Gasoline, Removing and Installing”, page 113](#)

⇒ [“2.31.3 Engine Cover, 2.0L TFSI, Removing and Installing”, page 113](#)

⇒ [“2.31.4 Engine Cover, 2.0L FSI, Removing and Installing”, page 114](#)

⇒ [“2.31.5 Engine Cover, 2.5L SRE Gasoline, Removing and Installing”, page 115](#)

⇒ [“2.31.6 Engine Cover, Removing and Installing, 1.9L TDI PD Engine”, page 116](#)

⇒ [“2.31.7 Engine Cover, 2.0L TDI PD, 103 kW, Removing and Installing”, page 117](#)

⇒ [“2.31.8 Engine Cover, Removing and Installing, 2.0L TDI CR Engines”, page 118](#)

⇒ [“2.31.9 Engine Cover, 2.0L 125 kW PD Diesel Engines, Removing And Installing”, page 118](#)

⇒ [“2.31.10 Engine Cover, Removing and Installing, 1.8L \(125kW\) and 2.0L \(1555 kW\) TSI Engine”, page 119](#)

### 2.31.1 Engine Cover, Removing and Installing, 1.4L TSI Hybrid Engines

#### Removing

- Pull the engine cover upward -arrow A- and remove in the direction of the -B arrows-.

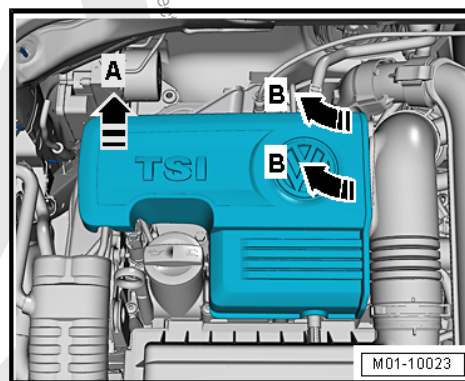
#### Installing



#### Note

*To avoid damage, do not hit engine cover with fist or a tool.*

- Install in reverse order of removal.







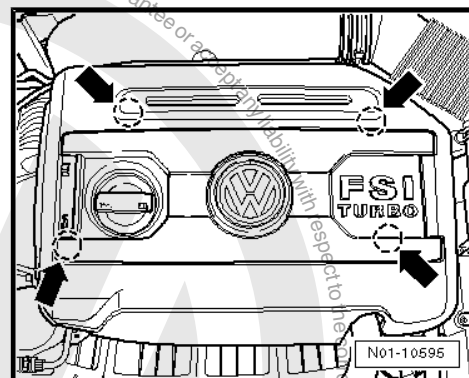
## 2.31.2 Engine Cover, 1.8L TSI and 2.0L TSI Gasoline, Removing and Installing

### Removing

- Disengage engine cover at the retaining points -arrows- and remove engine cover upward.

### Installing

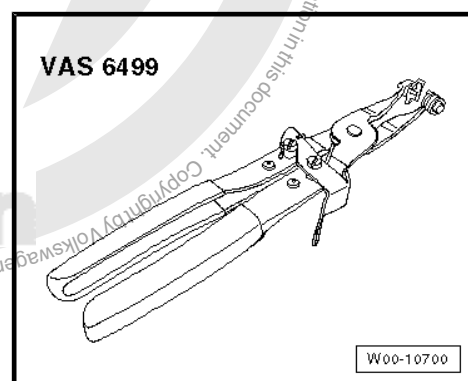
- Set engine cover onto retaining points -arrows- and press it on, until it is engaged.



## 2.31.3 Engine Cover, 2.0L TFSI, Removing and Installing

### Special tools and workshop equipment required

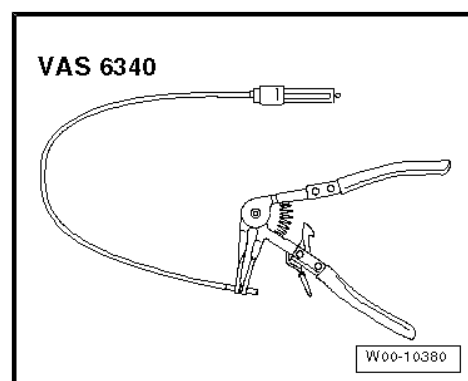
- ◆ Spring Clip Pliers - VAS 6499-



Or

- ◆ Hose Clip Pliers - VAS 6340-

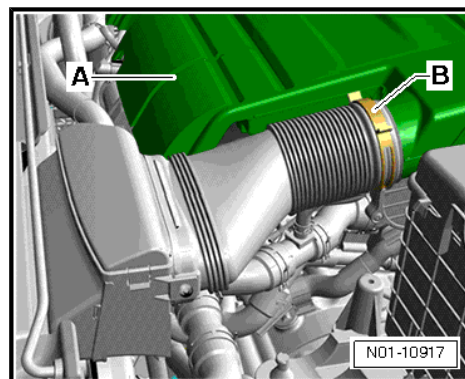
### Removing



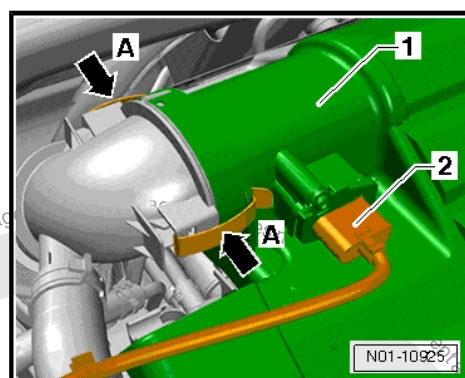




- Release the pressure on the spring clamp -B- using the Hose Clip Pliers - VAS 6499- or Hose Clip Pliers - VAS 6340- and remove the air intake from the engine cover -A-.
- Remove the connector -2- from the Mass Airflow Sensor - G70- and move it to the side.



- Open both clips -arrows A- from the engine cover -1-.
- Unclip the hose -2- from the engine cover -1-.



- Detach the engine cover at the attachment points -arrow 3-, -arrow 4-, -arrow 5- and at attachment point -arrow 6-.

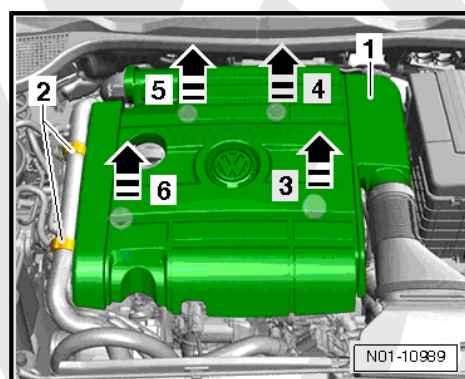
#### Installing



#### Note

*Do not grease the bearing rubber or the guides on the engine cover before installing.*

- Install in reverse order of removal.



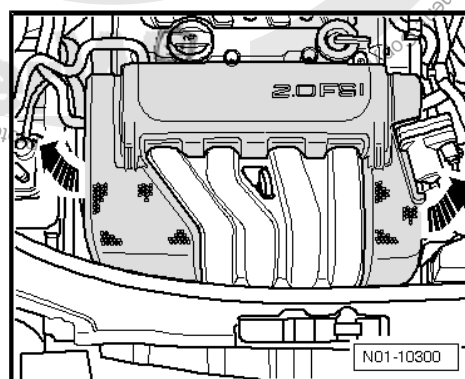
## 2.31.4 Engine Cover, 2.0L FSI, Removing and Installing

#### Removing

- Unclip the engine cover -arrows- and remove it.

#### Installing

- Install in reverse order of removal.



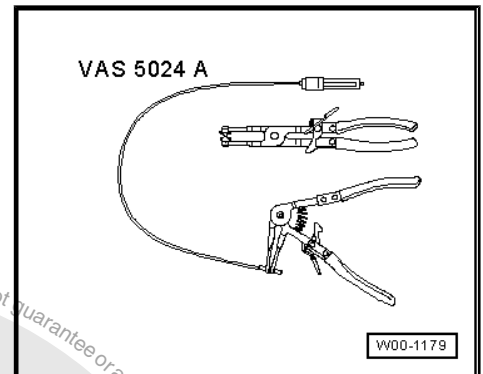




## 2.31.5 Engine Cover, 2.5L SRE Gasoline, Removing and Installing

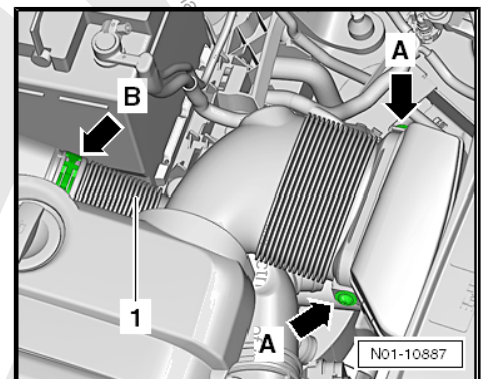
Special tools and workshop equipment required

- ◆ Spring Clip Pliers - VAS 5024A-



### Removing

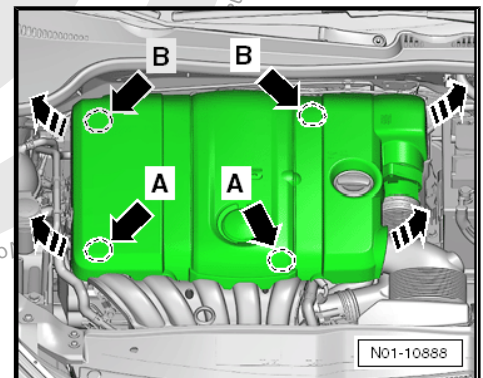
- Remove the screws on the air intake -arrow A-.
- Release the tension on the clamps on the mass airflow sensor -arrow B- using Spring Clip Pliers - VAS 5024A- and then slide clamps to the rear.
- Remove the air guides -1-.



- Loosen the engine cover at the fastening points -A arrows-.
- Lift the engine cover at the front.
- Loosen the engine cover at the fastening points -B arrows-.
- Remove engine cover upwards.

### Installing

- Mount the engine cover on the rear attaching points -arrows B- and press down on it.
- Then press down on the engine cover on the front attaching points -arrows A-.



### Note

*Carefully press the engine cover onto the fastening points by hand until it noticeably engages.*

- Installation is the reverse of removal.





## 2.31.6 Engine Cover, Removing and Installing, 1.9L TDI PD Engine



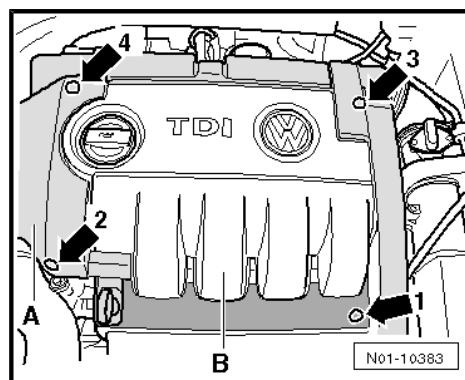
### Note

Engine cover consists of two individual parts.

- ◆ 1. The outer part, shaded in the illustration.
- ◆ 2. The center part, shown not shaded in the illustration.

### Removing

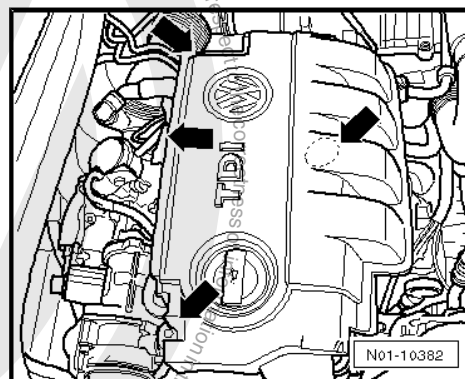
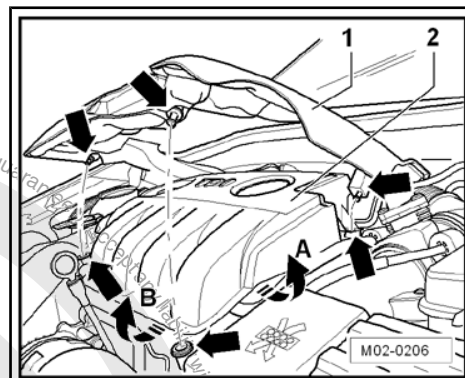
- Carefully disengage engine cover in the following sequence at the individual fastening points and raise up.
- ◆ -1-, -3-, -2-, -4-



- Remove the outer part -1-.
- Carefully release center part -2- and raise slightly.

### Installing

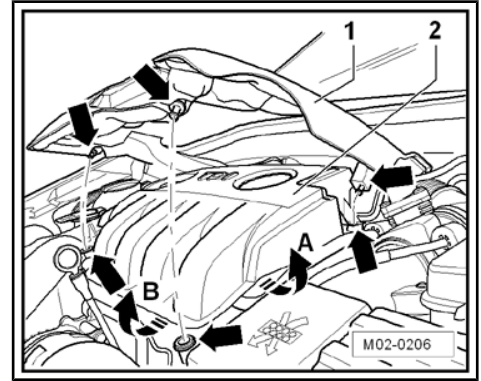
- Position engine cover on fastening points -arrows- and press on.







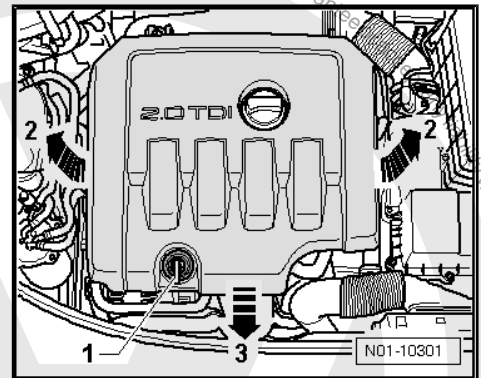
- Then position outer part -1- on attachment points -arrows- and press on.



## 2.31.7 Engine Cover, 2.0L TDI PD, 103 kW, Removing and Installing

### Removing

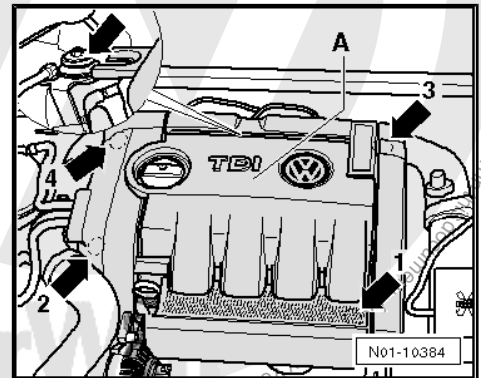
- Remove oil dipstick -1-.
- Disengage and lift engine cover -arrow 2-.



- Then remove forward -upper arrow in illustration-

### Installing

- Slide engine cover -A- in at fastening point -upper arrow in picture- first.
- Then position engine cover -A- on other fastening points -arrows 1 to 4- and press on until you feel it engage.







## 2.31.8 Engine Cover, Removing and Installing, 2.0L TDI CR Engines

### Removing

- Pull the engine cover off the fastening points -arrow-.

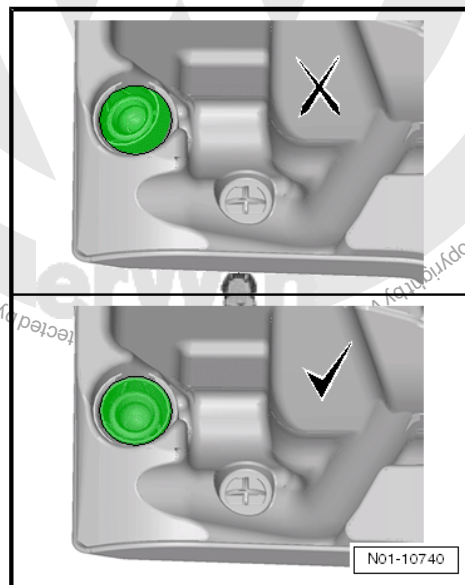
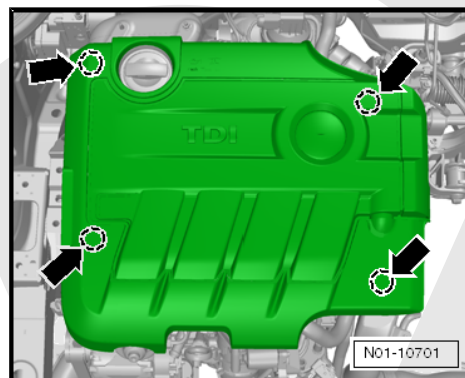
### Installing



#### Caution

***Make sure the 4 fasteners (ball sockets) are positioned correctly before installing the engine cover. Adjust their position if necessary. Otherwise the engine cover will get damaged.***

- If necessary push the ball sockets on the engine cover into the correct position.
- Position the engine cover on the mounting points and press on the corners.



## 2.31.9 Engine Cover, 2.0L 125 kW PD Diesel Engines, Removing And Installing

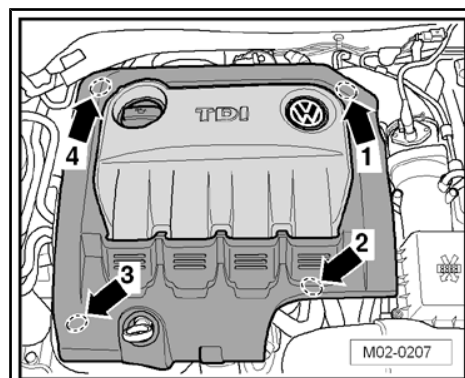
### Removing



#### Note

*Engine cover consists of two individual parts.*

- ◆ 1. The outer part, “dark” shaded in the illustration.
- ◆ 2. The center part, shown “lightly” shaded here in illustration.



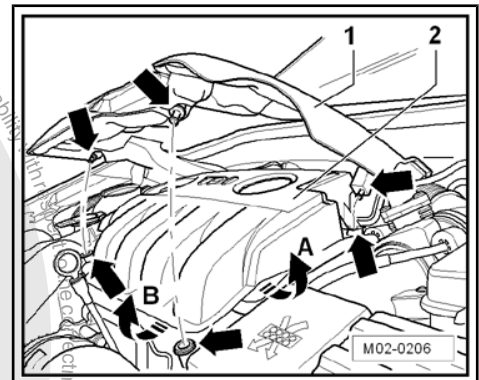
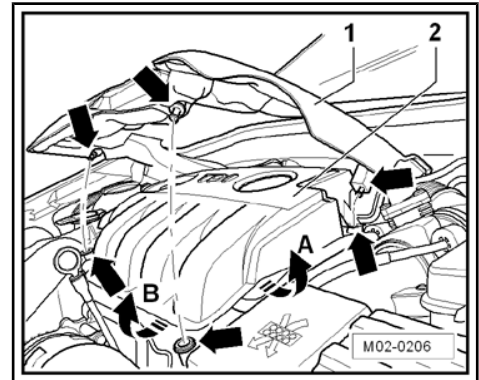




- Carefully disengage engine cover in the following sequence at the individual fastening points and raise up.
- Remove the outer part -1-.
- Carefully release center part -2- and raise slightly.

#### Installing

- First position center part -2- on attachment points and press on.
- Then position outer part -1- on attachment points -arrows- and press on.



### 2.31.10 Engine Cover, Removing and Installing, 1.8L (125kW) and 2.0L (155 kW) TSI Engine

#### Removing

- Carefully remove the engine cover from the pins -arrows-.



#### Note

*Do not remove the engine cover abruptly or to one side.*

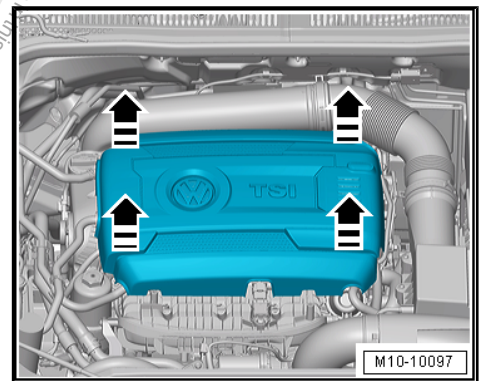
#### Installing

- Position the engine cover.
- Press the engine cover first in the rubber grommets on the left side and then in the rubber grommets on the right side.



#### Note

*To avoid damage, do not hit engine cover with fist or a tool.*







## 2.32 Lower Engine Compartment Cover, Removing and Installing

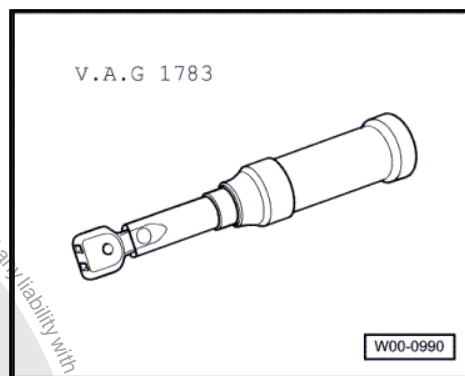
⇒ ["2.32.1 Lower Engine Compartment Cover, Version 1, Large Noise Insulation, Removing and Installing", page 120](#)

⇒ ["2.32.2 Lower Engine Compartment Cover, Version 2, Small Noise Insulation, Removing and Installing", page 120](#)

### 2.32.1 Lower Engine Compartment Cover, Version 1, Large Noise Insulation, Removing and Installing

Special tools and workshop equipment required

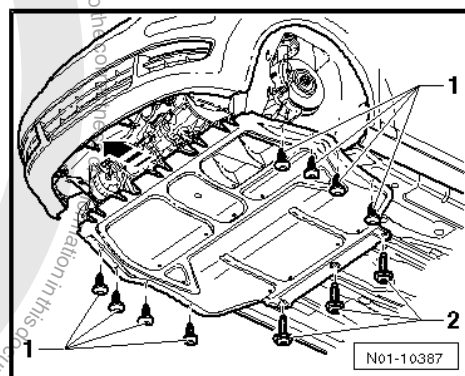
- ◆ Torque Wrench - V.A.G 1783-



- ◆ Cordless Drill 12V/2.0 Ah - VAS 5826-

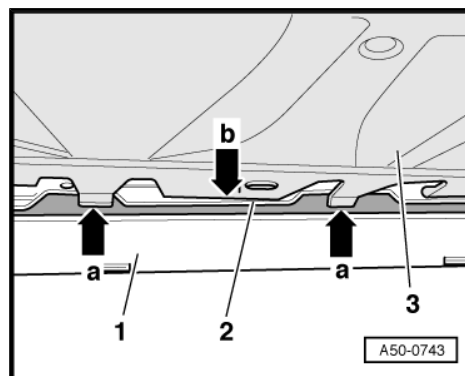
#### Removing

- 1 Sheet metal screw (quantity 8), tightening specification: 2 Nm
  - 2 Combination screws these screws are microencapsulated, always replace the screws after loosening, quantity 3, tightening specification 6 Nm.
- Remove the bolts -arrows-.
  - Remove noise insulation.



#### Installing

- Slide the noise insulation -3- into the bottom of the lock carrier -2- as illustrated.
- The narrow latches -arrow a- must be slid below or wide latches -arrow b- slid above the lock carrier edge -2-.
- Retaining tabs must engage over wide tabs in lock carrier holes when doing so.
- Tighten the bolts -arrows- to the tightening specification.



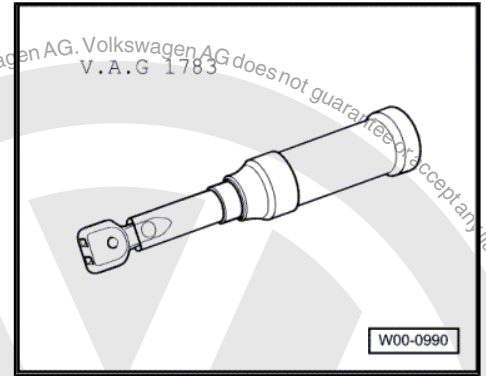
### 2.32.2 Lower Engine Compartment Cover, Version 2, Small Noise Insulation, Removing and Installing

Special tools and workshop equipment required





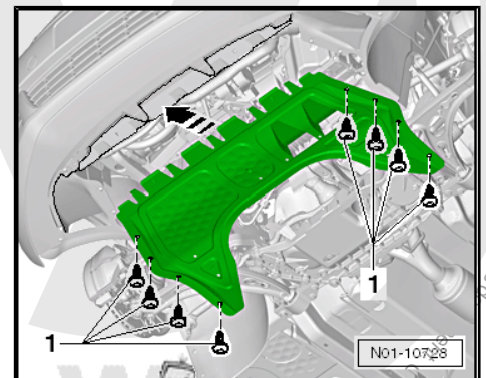
◆ Torque Wrench - V.A.G 1783-



◆ Cordless Drill 12V/2.0 Ah - VAS 5826

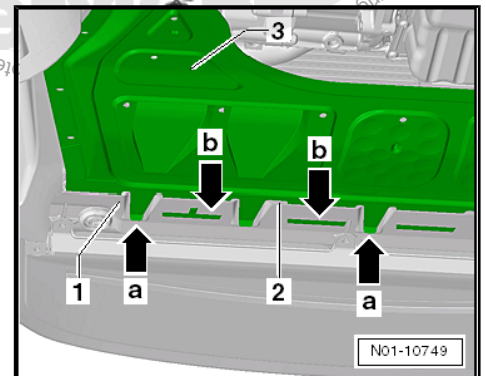
**Removing**

- 1 - Sheet metal screws, tightening specification: 2 Nm
- Remove the screws -arrows- with a Cordless Drill 12V/2.0 Ah - VAS 5826- .
- Remove noise insulation.

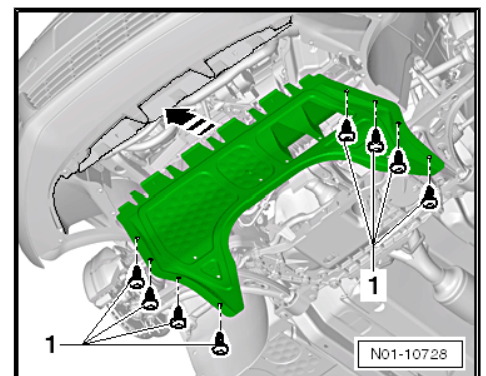


**Installing**

- Slide the noise insulation -3- into the bottom of the lock carrier -2- as illustrated.
- The narrow latches -arrow a- must be slid below or wide latches -arrow b- slid above the lock carrier edge -2-.
- Retaining tabs must engage over wide tabs in lock carrier holes when doing so.



- Tighten the bolts -arrows- to the tightening specification.



## 2.33 Engine Oil Level, Checking

Pay attention to the following:

- After turning off the engine, wait at least three minutes for the oil to flow back into the oil pan.





- Pull out the oil dipstick and wipe it with clean cloth. Insert the dipstick and push it all the way down.
- Pull out dipstick again and read oil level.

Only valid for engine codes: CNLA and CRJA



#### Note

*The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if customer requests it. This makes an additional filling possible to the specified oil change amount to the maximum limit on the dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*

#### Markings on the oil dipstick

- Drain or extract some of the oil if the oil level goes above the maximum limit -A- to prevent damage to the catalytic converter.
- If the oil level is under the minimum mark -C- fill the oil, minimum of 0.5 liters. Engine oil specification. Refer to [⇒ "1.15 Service Tables", page 29](#).

Applies to all other engine codes:

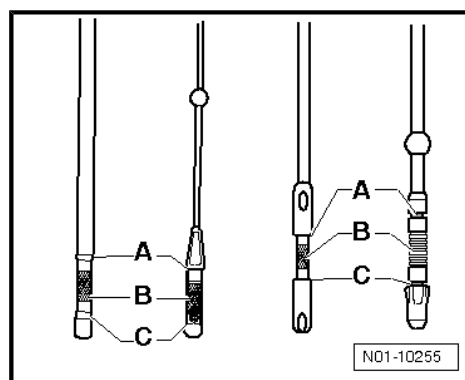
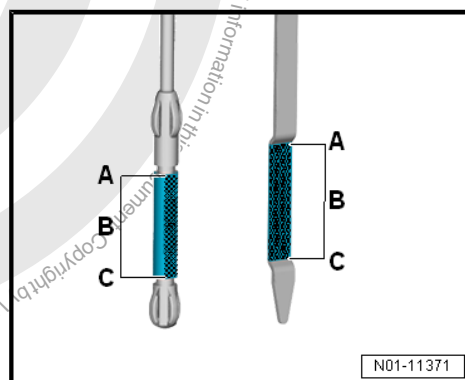


#### Note

*The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if customer requests it. This makes an additional filling possible to the specified oil change amount to the maximum limit on the oil dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*

#### Markings on the oil dipstick

- Drain or extract some of the oil if the oil level goes above the -A- mark to prevent damage to the catalytic converter.
- If the oil level is under the -C- mark fill the oil, minimum of 0.5 liters. Engine oil specification. Refer to [⇒ "1.15 Service Tables", page 29](#).







## 2.34 Engine Oil, Draining or Extracting and Filling, Replacing Oil Filter

⇒ [“2.34.1 Information for Engines with Turbochargers”, page 123](#)

⇒ [“2.34.2 Engine Oil, Draining or Extracting”, page 124](#)

⇒ [“2.34.3 Oil Filter, 1.4L SRE Gasoline, Removing and Installing”, page 125](#)

⇒ [“2.34.4 Oil Filter, Removing and Installing, 1.4L TSI 90 kW”, page 126](#)

⇒ [“2.34.5 Oil Filter, 1.4L TSI, Removing and Installing, 103 kW and 125 kW”, page 127](#)

⇒ [“2.34.6 Oil Filter, Removing and Installing, 1.4L TSI 118kW”, page 128](#)

⇒ [“2.34.7 Oil Filter, Removing and Installing, 1.4L SRE Gasoline”, page 129](#)

⇒ [“2.34.8 Oil Filter, 2.0L SRE Gasoline, Removing and Installing”, page 132](#)

⇒ [“2.34.9 Oil Filter, Replacing, 2.0L TSI Engines”, page 132](#)

⇒ [“2.34.10 Oil Filter, 2.0L FSI and TFSI and 2.5L SRE Gasoline, Removing and Installing”, page 134](#)

⇒ [“2.34.11 Oil Filter, Removing and Installing, TDI PD”, page 138](#)

⇒ [“2.34.12 Oil Filter, Replacing TDI CR”, page 139](#)

⇒ [“2.34.13 Oil Filter, Replacing, 1.8L \(125 kW\) and 2.0L \(155 kW\) TSi Engine”, page 140](#)

⇒ [“2.34.14 Filling Engine Oil”, page 141](#)

### 2.34.1 Information for Engines with Turbochargers

After the engine and oil filters have been replaced, pay attention to the following after the engine has been started for the first time:

- ◆ As long as the oil pressure indicator lamp in the instrument cluster is on, the engine may only run in idle.
- ◆ Do not touch the accelerator pedal!
- ◆ When the warning light extinguishes, the full oil pressure is achieved and the engine can be accelerated.



#### Caution

*Bumping the accelerator pedal can damage the turbocharger or destroy it completely. Since the turbocharger operates at high speeds, the bearing can become destroyed within seconds if it is not lubricated sufficiently.*

*If you detect any oil leaks, vibrations or unnatural sounds coming from the turbocharger, switch off the engine immediately.*





## 2.34.2 Engine Oil, Draining or Extracting

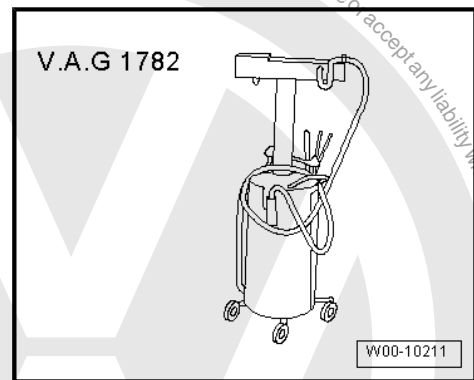


### Caution

- ◆ *If the vehicle is a hybrid, then inspect all hybrid specific components. Refer to  
⇒ "2.21 Hybrid Components, Checking for Damage to High Voltage Components and Cables", page 90.*
- ◆ *Contact to the responsible high voltage technician is something needs clarification.*
- ◆ *On engines with standing oil filter module, the oil filter should be changed before the oil change  
⇒ "2.34.5 Oil Filter, 1.4L TSI, Removing and Installing, 103 kW and 125 kW", page 127,  
⇒ "2.34.11 Oil Filter, Removing and Installing, TDI PD", page 138. Removing the filter element will open a valve and oil in the filter housing will flow automatically into the crankshaft housing.*
- ◆ *The oil drain plug has a permanent gasket. Always replace the oil drain plug.*

### Special tools and workshop equipment required

- ◆ Used Oil Collection and Extraction Unit - V.A.G 1782-



- ◆ Oil Absorbent Towel - VAS 6204/1.

### Engine Oil, Draining or Extracting

Perform the following:

- Extract the engine oil using a Used Oil Collection and Extraction Unit - SMN372500- .

Or

- Remove oil drain plug
- Let engine oil drain.
- Install the new oil drain plug and seal hand-tight and then tighten to the tightening specification.
- Fill the engine oil. Correct oil specification. Refer to  
⇒ "1.15 Service Tables", page 29 .

Engine oil capacity. Refer to ⇒ Fluid Capacity Table; Rep. Gr. 03 .

### Oil Drain Plug Tightening Specifications:

- ◆ Gasoline engines 30 Nm
- ◆ Diesel engines 30 Nm





#### WARNING

- ◆ *Do not exceed the tightening specifications.*
- ◆ *A torque figure that is too high may lead to leaks or even damage the oil pan.*

### 2.34.3 Oil Filter, 1.4L SRE Gasoline, Removing and Installing

#### Special tools and workshop equipment required

- ◆ 30 mm Wrench - VAS 5399-
- ◆ 30 x 32 mm Double Ring Wrench - VAS 5410-

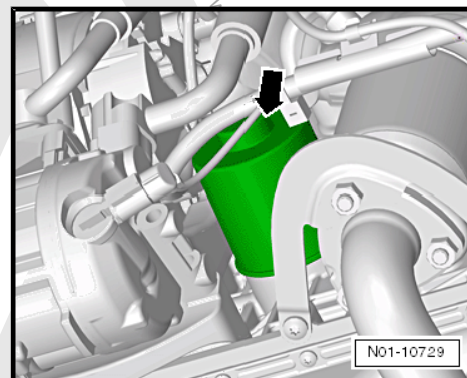
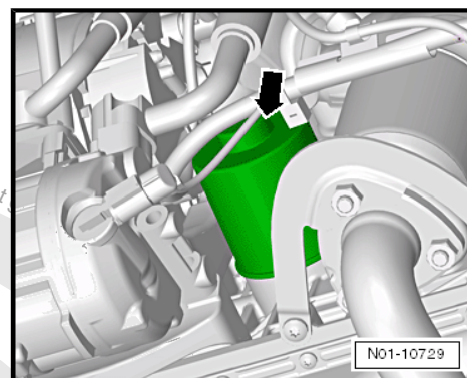
#### Removing

- Remove the engine compartment cover (noise insulation) “bottom”. Refer to  
⇒ [“2.32 Lower Engine Compartment Cover, Removing and Installing”, page 120](#) .



#### Note

- ◆ *Follow all disposal regulations.*
- ◆ *Coat the new o-rings with oil before installing them.*
- ◆ *Avoid engine oil drips on components in engine compartment.*
- Remove the oil filter -arrow-, for example, with a 30 mm Wrench - VAS 5399- or a 30 x 32 mm Double Ring Wrench - VAS 5410- .
- Clean the sealing surface on the engine.



#### Installing

- Lightly coat oil filter seal with oil.
  - Screw in filter and tighten hand-tight.
- Install in reverse order of removal.





## 2.34.4 Oil Filter, Removing and Installing, 1.4L TSI 90 kW



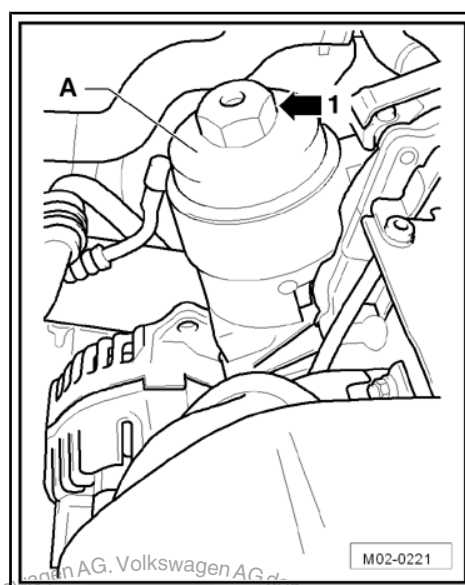
### Note

- ♦ Follow all disposal regulations.
- ♦ Coat the new O-rings with oil before installing them.
- ♦ Be careful not to let any engine oil drip onto other vehicle parts.

### Removing

Remove the engine cover. Refer to  
[⇒ "2.31 Upper Engine Cover, Removing and Installing", page 112](#).

- Remove the oil filter cover -A- using, for example, a 36 mm socket wrench -arrow-.



- Remove the oil filter cover -1-, the oil filter -4- and the valve -5-.

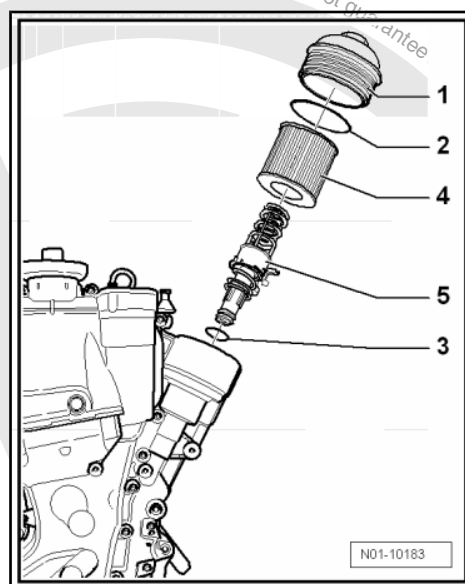
### Installing

- Remove the O-ring -2- from the oil filter cover and the o-ring -3- from the valve.
- Replace the old oil filter with a new one -4-.



### Note

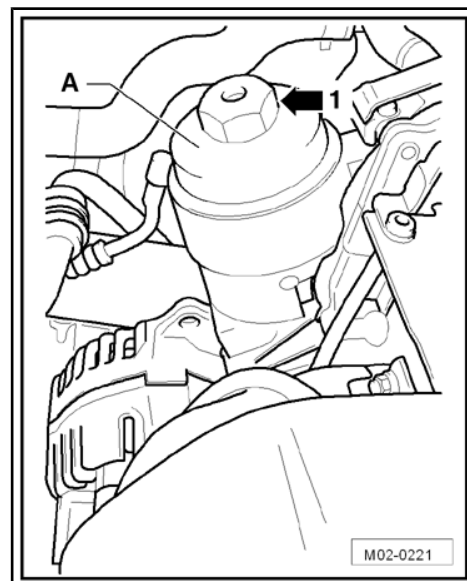
Follow all disposal regulations.







- Tighten the oil filter cover -A- to 25 Nm.
- Install in reverse order of removal.



### 2.34.5 Oil Filter, 1.4L TSI, Removing and Installing, 103 kW and 125 kW



#### Note

- ◆ Follow all disposal regulations.
- ◆ Coat the new O-rings with oil before installing them.
- ◆ Be careful not to let any engine oil drip onto other vehicle parts.

#### Removing

Remove the engine cover. Refer to  
⇒ ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).

- Remove oil filter cover -arrow- with, e.g. socket insert SW 36.







- Remove the oil filter cover -1-, the oil filter -4- and the valve -5-.

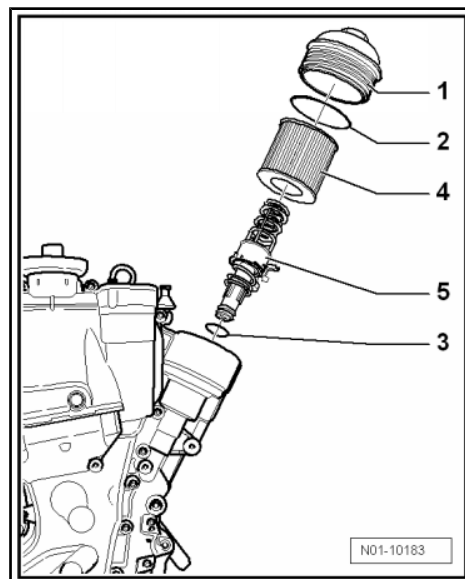
#### Installing

- Remove the o-ring -2- from the oil filter cover and the o-ring -3- from the valve.
- Replace the old oil filter with a new one -4-.



#### Note

*Follow all disposal regulations.*



- Tighten oil filter cover -arrow- to 25 Nm.

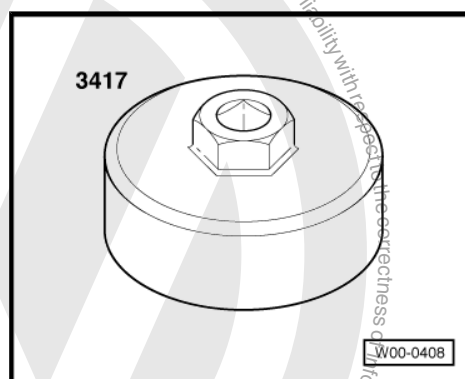
Install in reverse order of removal.



## 2.34.6 Oil Filter, Removing and Installing, 1.4L TSI 118kW

### Special tools and workshop equipment required

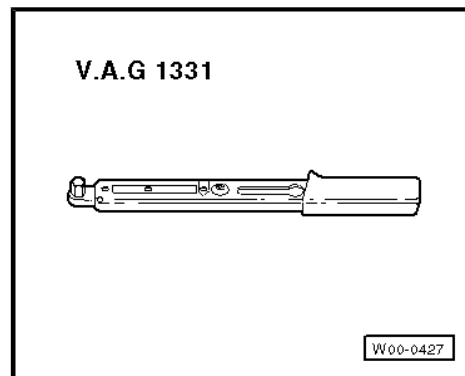
- ♦ Oil Filter Wrench - VAS 3417 -







- ◆ Torque Wrench 5-50 Nm - V.A.G 1331-



## Removing



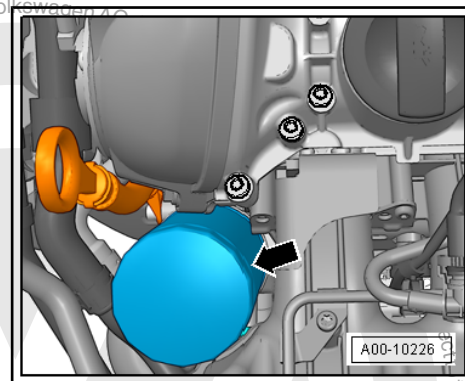
### Note

- ◆ *Be careful not to let any engine oil drip onto other vehicle parts.*
- ◆ *Cover the generator with a cloth before removing.*
- First loosen the oil filter -arrow- using a tension band or a Oil Filter Wrench - 3417- , before removing the oil filter completely.
- Wait a moment so that the engine oil can flow out of the filter and into the engine.
- Remove the oil filter.



### Caution

*Be careful not to let any oil drip onto the ribbed belt or generator.*



## Installing



### Note

- ◆ *Follow the installation instructions on the oil filter.*
- ◆ *Follow all disposal regulations.*
- Clean the sealing surface on the oil filter.
- Lightly coat oil filter seal with oil.
- Install the new oil filter -arrow- by hand.
- Then tighten to 20 Nm.

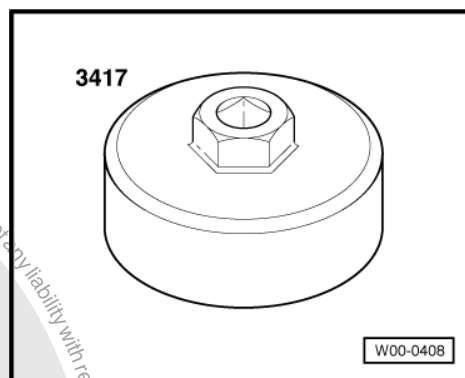
## 2.34.7 Oil Filter, Removing and Installing, 1.4L SRE Gasoline

Special tools and workshop equipment required

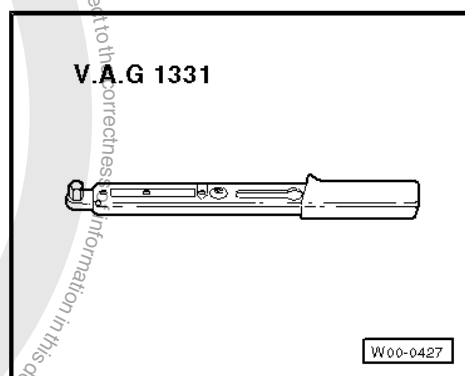




◆ Oil Filter Wrench - VAS 3417-



◆ Torque Wrench 5-50 Nm - V.A.G 1331-



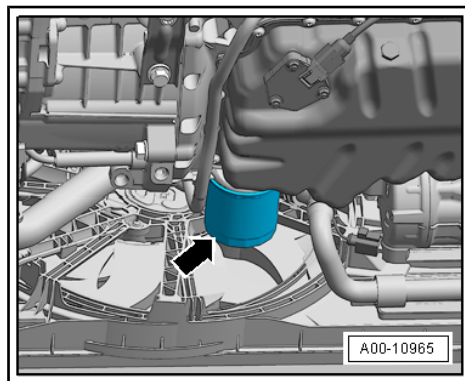
Removing

- Remove the engine compartment cover (noise insulation) “bottom”. Refer to [⇒ “2.32 Lower Engine Compartment Cover, Removing and Installing”, page 120](#).
- Loosen and remove the oil filter -arrow- using Hazet Tension Band - 2171-1- or Oil Filter Wrench - 3417- .

Installing



- ◆ Follow the installation instructions on the oil filter.
- ◆ Follow all disposal regulations.
- Clean oil filter sealing surface on engine.
- Coat the oil filter rubber grommet with engine oil.
- Install the oil filter -arrow- and then tighten it hand-tight.
- The use Oil Filter Wrench - 3417- to tighten oil filter to the specification.
- Install the engine compartment cover (noise insulation) “bottom”. Refer to [⇒ “2.32 Lower Engine Compartment Cover, Removing and Installing”, page 120](#).



Tightening specification	Nm
Oil filter	20





Draining the oil during the first oil change. ➔ [page 131](#) .

Draining the oil after the first oil change. ➔ [page 131](#) .

### Draining the Oil During the First Oil Change

- Remove the oil drain plug with permanent seal -1- and dispose.
- Let engine oil drain.



**Note**

*Follow all disposal regulations.*

- Install the new oil drain plug -3- with new sealing ring -2- hand tight and then tighten to the specified tightening specification.

### Draining the Oil After the first Oil Change

- Remove the oil drain plug -1- and dispose of the sealing ring -3-.



**Note**

*The oil drain plug will be used again after the first oil change.*

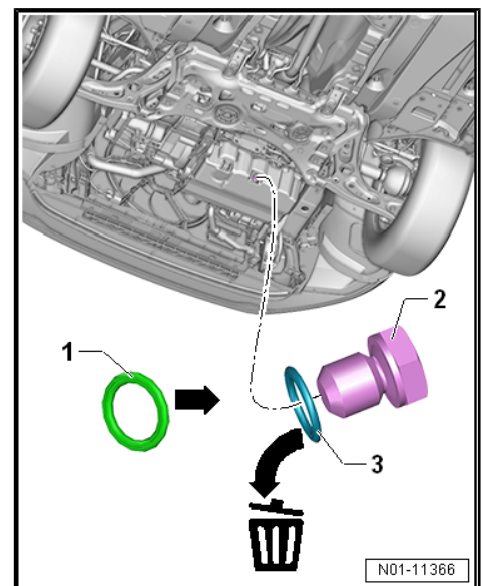
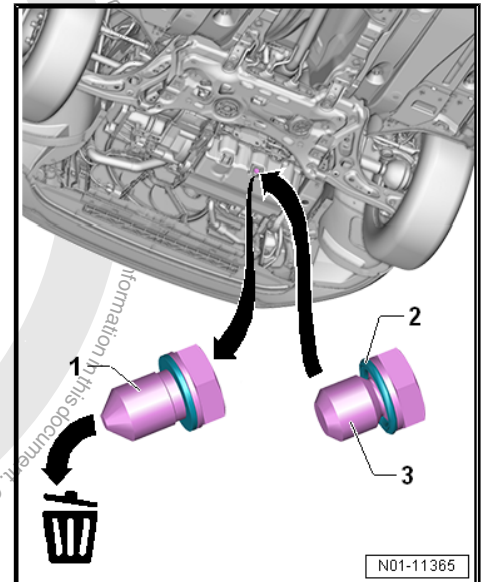
- Let engine oil drain.



**Note**

*Follow all disposal regulations.*

- Install the oil drain plug -2- with new sealing ring -1- hand tight and then tighten to the specified tightening specification.
- Install the engine compartment cover (noise insulation) "bottom". Refer to ➔ ["2.32 Lower Engine Compartment Cover, Removing and Installing", page 120](#) .



Tightening specification	Nm
Oil drain plug	30

- Fill the engine oil. Correct oil specification. Refer to ➔ ["1.15 Service Tables", page 29](#) .

Engine oil capacity, refer to ➔ Fluid Capacity Tables; Rep. Gr.  
03





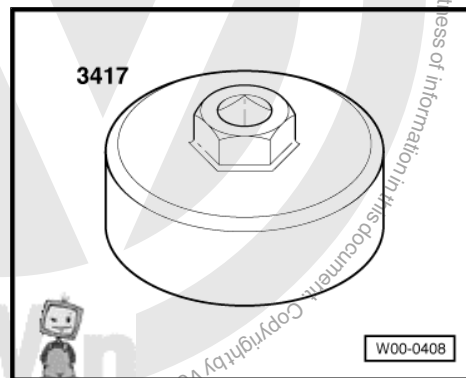
#### WARNING

- ◆ *Do not exceed the tightening specifications.*
- ◆ *A torque figure that is too high may lead to leaks or even damage the oil pan.*

### 2.34.8 Oil Filter, 2.0L SRE Gasoline, Removing and Installing

#### Special tools and workshop equipment required

- ◆ Oil Filter Wrench - VAS 3417-



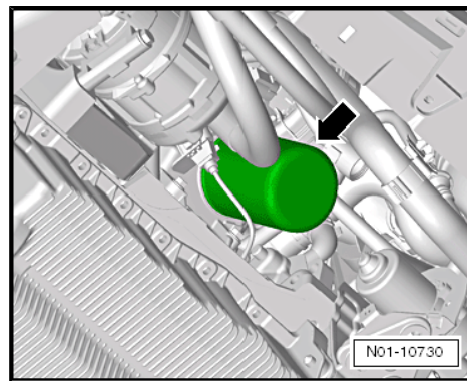
- Remove the engine compartment cover (noise insulation) bottom. Refer to  
⇒ ["2.32 Lower Engine Compartment Cover, Removing and Installing", page 120](#) .
- Loosen oil filter -arrow- from below using tension strap or Oil Filter Wrench - 3417- as an aid.



#### Note

*Follow all disposal regulations.*

- Clean the sealing surface on the oil cooler.
- Lightly coat oil filter seal with oil.
- Tighten filter by hand.
- Install the engine compartment cover (noise insulation) "bottom". Refer to  
⇒ ["2.32 Lower Engine Compartment Cover, Removing and Installing", page 120](#) .



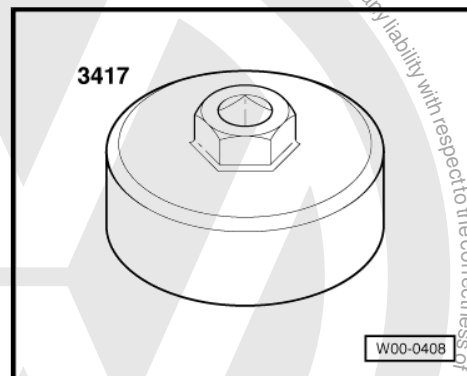
### 2.34.9 Oil Filter, Replacing, 2.0L TSI Engines

#### Special tools and workshop equipment required

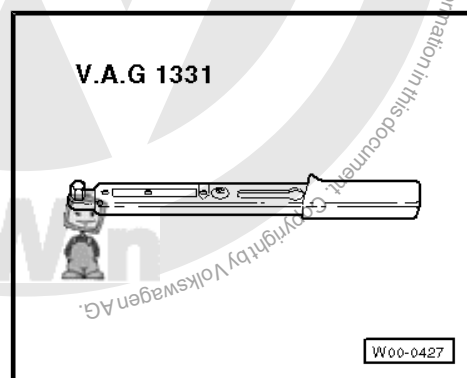




◆ Oil Filter Wrench - VAS 3417-



◆ Torque Wrench 5-50 Nm - V.A.G 1331-



## Removing



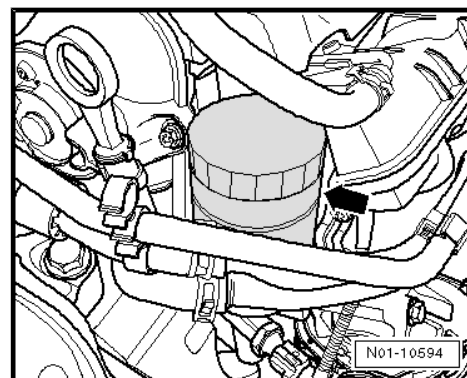
### Note

- ◆ *Be careful not to let any engine oil drip onto other vehicle parts.*
- ◆ *Cover the generator with a cloth before removing.*
- First loosen the oil filter -arrow- using a tension band or a Oil Filter Wrench - 3417- , before removing the oil filter completely.
- Wait a moment so that the engine oil can flow out of the filter and into the engine.
- Remove the oil filter.



### Caution

*Be careful not to let any oil drip onto the ribbed belt or generator.*



## Installing



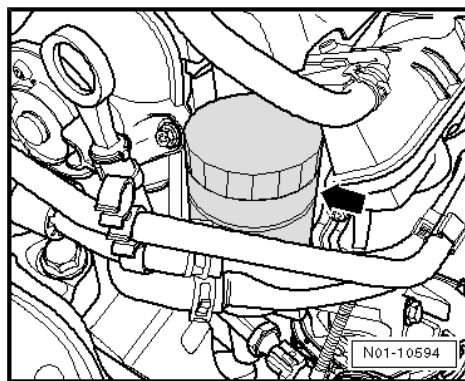
### Note

- ◆ *Follow the installation instructions on the oil filter.*
- ◆ *Follow all disposal regulations.*
- Clean the oil filter sealing surface on the bracket.
- Lightly coat oil filter seal with oil.





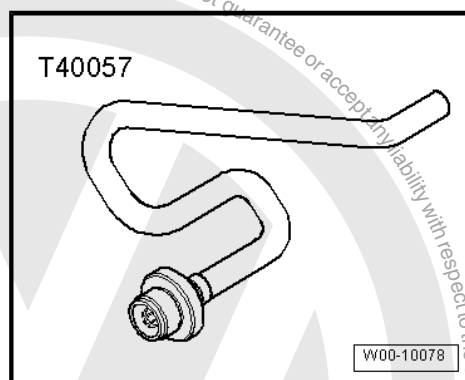
- Install the new oil filter -arrow- by hand.
- Then tighten to 20 Nm.



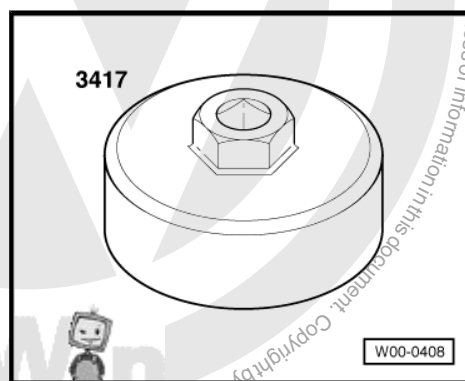
## 2.34.10 Oil Filter, 2.0L FSI and TFSI and 2.5L SRE Gasoline, Removing and Installing

### Special tools and workshop equipment required

- ◆ Oil Drain Adapter - T40057-



- ◆ Oil Filter Wrench - VAS 3417-



- ◆ Torque Wrench 5-50 Nm - V.A.G 1331/-
- ◆ Needle-nose pliers



### Caution

- ◆ *Empty the oil filter housing before removing it.*

### Draining the Oil Filter Housing:

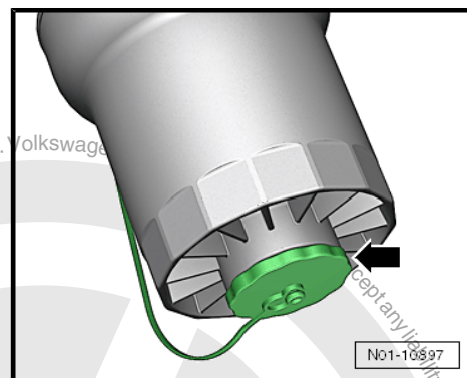
- Remove the engine compartment cover (noise insulation) "bottom". Refer to  
⇒ ["2.32 Lower Engine Compartment Cover, Removing and Installing", page 120](#) .



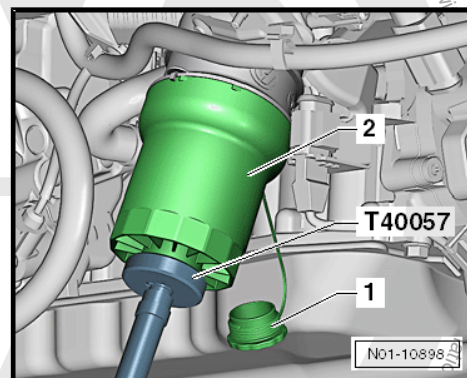


## Note

- ◆ *A valve inside the oil filter housing opens while installing the Oil Drain Adapter - T40057- .*
- ◆ *The valve closes again automatically when the Oil Drain Adapter - T40057- is removed.*
- Remove the dust cap -arrow- from the oil filter housing.



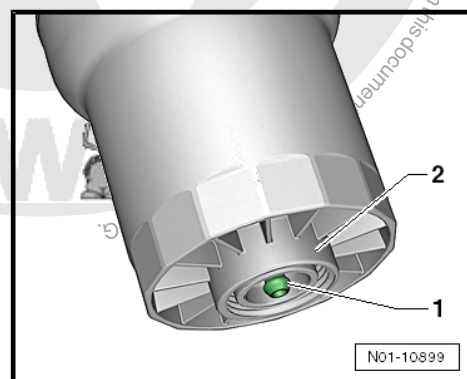
- Install the Oil Drain Adapter - T40057- in the oil filter housing and hold the hose in a drip tray.
- Drain the engine oil.
- Remove the Oil Drain Adapter T40057- .



The drain valve -1- should seal flush with the bottom of the oil filter housing -2-.

## Oil filter insert, removing

- Loosen the oil filter housing using an Oil Filter Wrench - VAS 3417- .
- Then remove it by hand and remove together with the oil filter insert.







- Remove the oil filter insert -2- from the oil filter housing -4-.

#### Seal, Removing

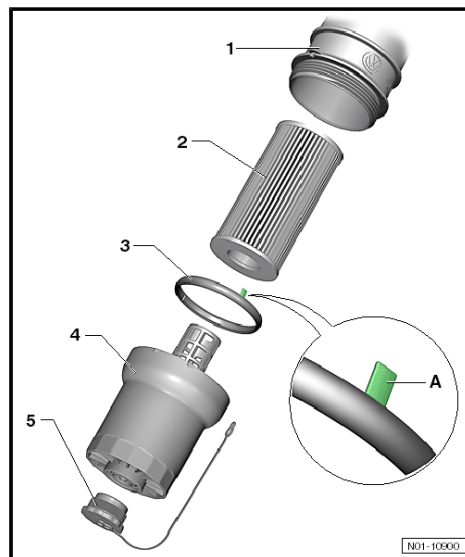


#### Caution

*The seal on the oil filter housing -3- must be replaced each time the oil filter is changed -2- or each time the oil filter housing is loosened.*

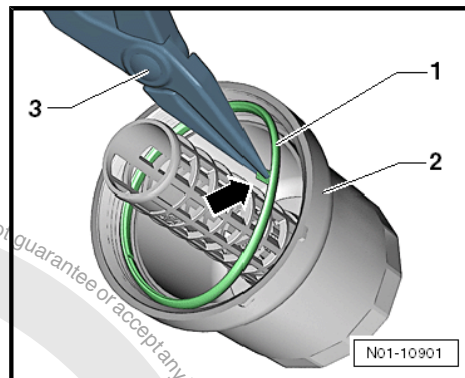
*The sealing ring is equipped with a so-called "service flag" -A-.*

- ◆ *The sealing ring can be gripped at the "service flag" -A- with a suitable tool and then removed from the seal groove.*

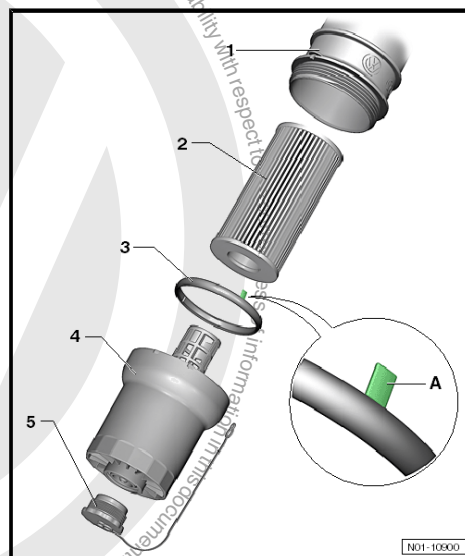


- Remove the seal -1- from the groove on the oil filter housing -2- with needle nose pliers -3- on the "service flag" -arrow-.

#### Seal, Installing



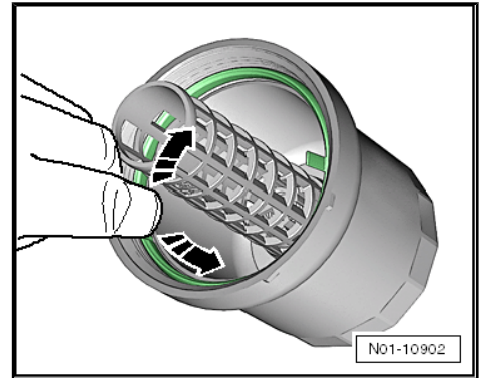
- Coat the seal -3- with oil.
- Install the seal into the groove in the oil filter housing making sure the service flag -A- is facing upward.







- Install the seal and then make sure it is even all the way around the groove.

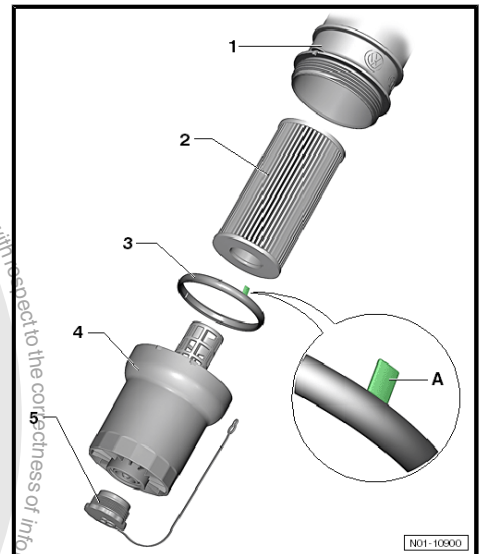


### Oil Filter Insert, Installing

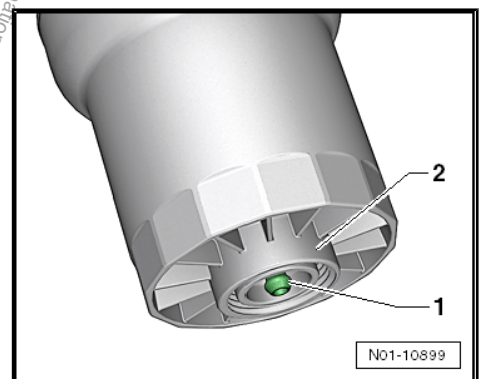
- Install the new oil filter insert -2- all the way into the oil filter housing -4-.

### Oil Filter Housing, Installing

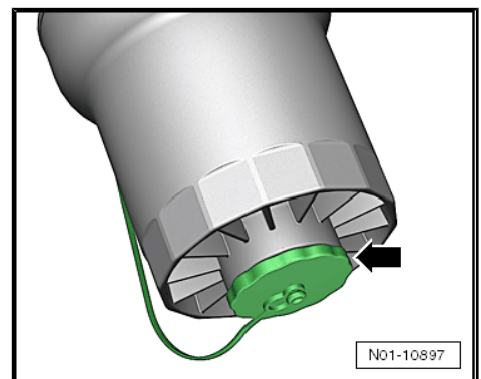
- Install oil filter housing -4- with new sealing ring -3- and new oil filter insert -2- by hand until almost on oil filter housing stop -1-.



Tighten the oil filter housing -2- to 25 Nm.



- Install the dust cap -arrow- hand-tight in the oil filter housing.
- Install the engine compartment cover (noise insulation) "bottom". Refer to ["2.32 Lower Engine Compartment Cover, Removing and Installing", page 120](#) .







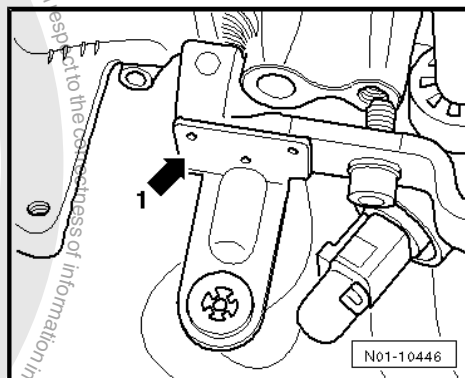
## 2.34.11 Oil Filter, Removing and Installing, TDI PD

### Removing



#### Note

- ♦ Follow all disposal regulations.
- ♦ Coat the new o-rings with oil before installing them.
- Remove the bracket (if equipped) from the intake manifold -1-.
- Unclip the cable to make more space for removing the oil filter cover, if necessary.



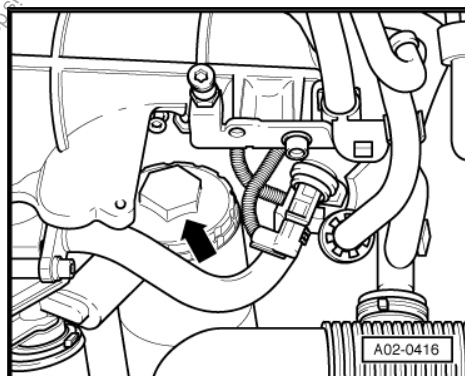
- Remove the cover -arrow-.



#### Note

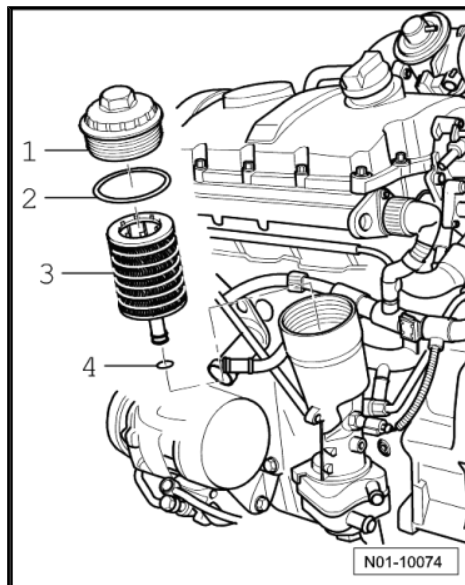
Loosen the cap before draining / extracting, so that the engine oil can run out of the filter housing.

- Clean sealing surfaces at cap and at oil filter housing.



### Installing

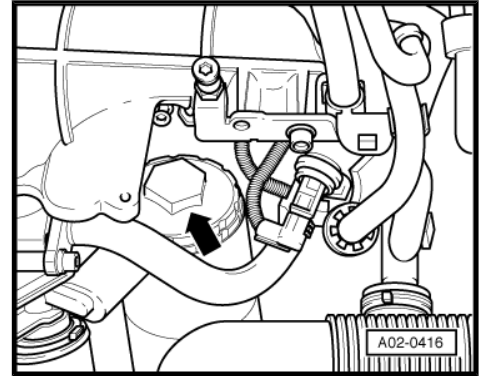
- Replace the filter -3-.
- Replace the o-rings -2 and 4-.







- Install the cap -arrow- and tighten it to 25 Nm.
- Install in reverse order of removal.



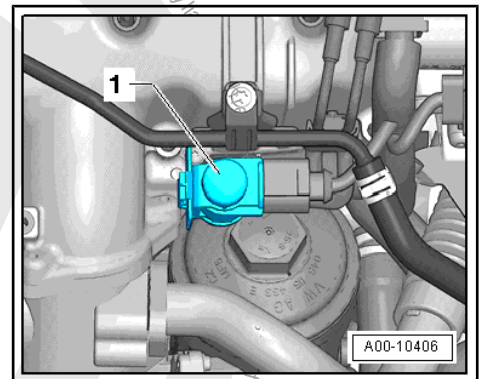
## 2.34.12 Oil Filter, Replacing TDI CR

### Removing



#### Note

- ◆ Follow all disposal regulations.
  - ◆ Coat the new o-rings with oil before installing them.
- Unclip the magnetic switching valve -1-.



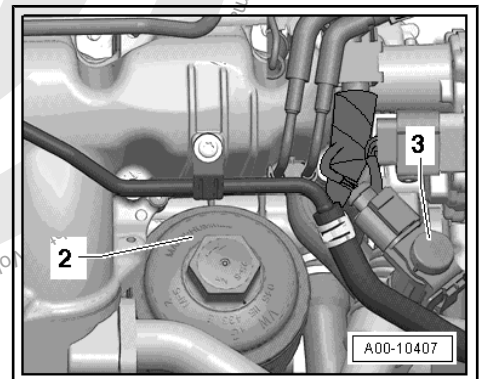
- Loosen the cap -2- with a wrench.



#### Note

*Loosen the cap before draining / extracting, so that the engine oil can run out of the filter housing.*

- Clean sealing surfaces at cap and at oil filter housing.

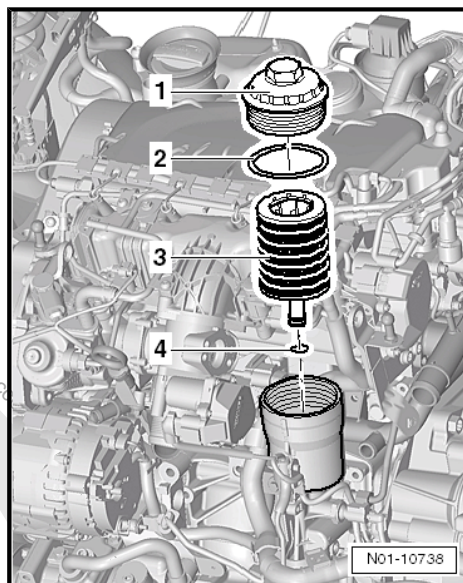






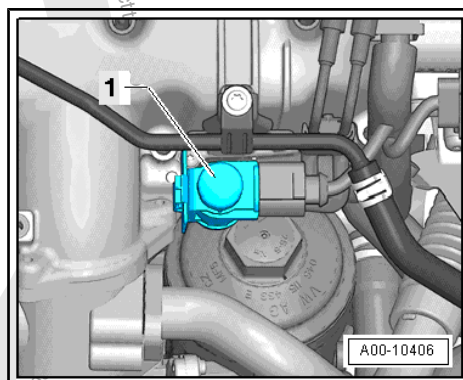
### Installing

- Replace the filter -3-.
- Replace the O-rings -2 and 4-.



- Install the cover and tighten to 25 Nm.

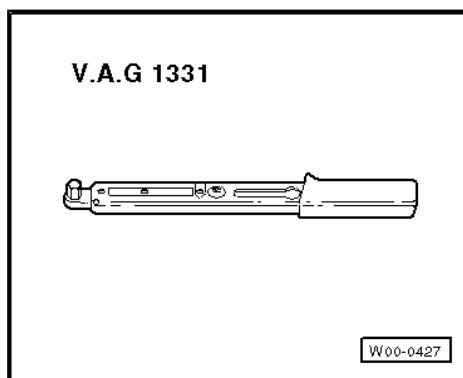
Install in reverse order of removal. Make sure the magnetic switching valve -1- audibly engages.



## 2.34.13 Oil Filter, Replacing, 1.8L (125 kW) and 2.0L (155 kW) TSi Engine

### Special tools and workshop equipment required

- ◆ Socket Wrench AF 32
- ◆ Torque Wrench 5-50 Nm - V.A.G 1331-



- ◆ Oil Absorbent Towel - VAS 6204/1-

### Removing

- Remove the “upper” engine cover. Refer to [⇒ “2.31 Upper Engine Cover, Removing and Installing”, page 112](#).





- Loosen oil filter housing -arrow- with Socket AF 32 .
- Wait a few minutes so that the engine oil can flow back into the oil filter housing.
- Remove oil filter housing -arrow- completely.



#### Note

*Make sure that no engine oil drips onto the engine. If necessary use an Oil Absorbent Towel - VAS 6204/1- .*

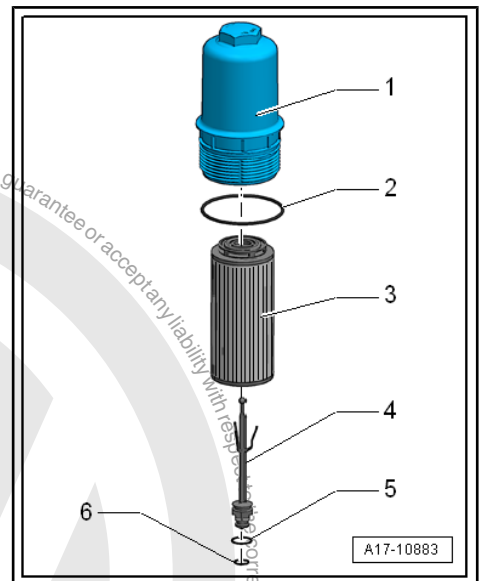
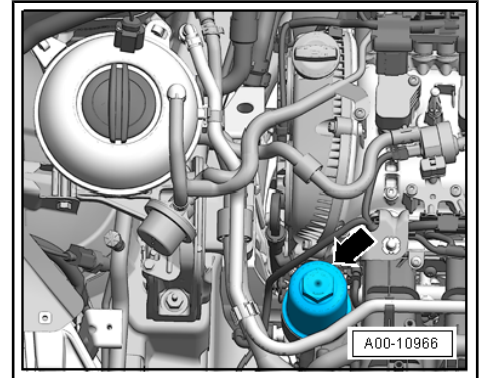
#### Change oil filter

- Remove the oil filter -3-.
- Coat the o-ring -2- with engine oil and install it into the groove on the oil filter housing -1-.
- Install the oil filter -3-.

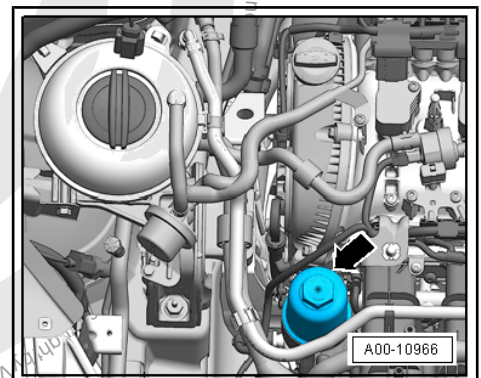


#### Note

*Ensure -4, 5 and 6- remain in the oil filter housing during removal and installation.*



- Install the oil filter housing -arrow- and tighten to the tightening specification using the Socket Wrench AF 32 .



Tightening specification	Nm
Oil filter housing	25

## 2.34.14 Filling Engine Oil

### Oil Specifications and Engine Oil Capacity:

Refer to ⇒ Fluid Capacity Tables; Rep. Gr. 03





## General Information



### Note

Follow all disposal regulations.

- After the oil is filled, wait 3 minutes and then check the oil level.
- Pull out the oil dipstick and wipe it with clean cloth. Insert the dipstick and push it all the way down.
- Pull out dipstick again and read oil level.

Only valid for engine codes: CNLA and CRJA



### Note

- ♦ *The oil level must be at least in the upper third of the measuring range -B- during the delivery inspection. So that the highest customer satisfaction can be reached.*
- ♦ *The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if customer requests it. This makes an additional filling possible to the specified oil change amount to the maximum limit on the dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*

### Markings on the oil dipstick

A - Do not add oil.

B - The oil can be filled to the maximum limit -A-.

C - Add oil. The oil level must be at least in the upper half of the measuring range -B-.

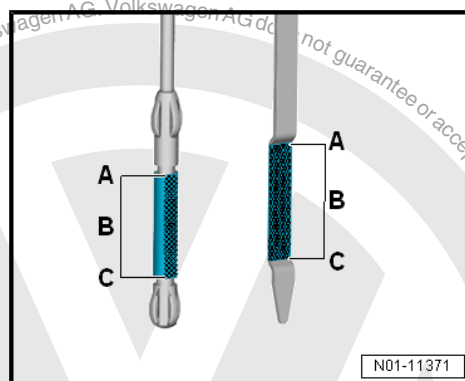
- Drain or extract some of the oil if the oil level goes above the maximum limit -A- to prevent damage to the catalytic converter.
- If the oil level is under the minimum mark -C- fill the oil, minimum of 0.5 liters engine oil specification.

Applies to all other engine codes:



### Note

- ♦ *The oil level must always be in the A range at the delivery inspection. So that the highest customer satisfaction can be reached.*
- ♦ *The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if customer requests it. This makes an additional filling possible to the specified oil change amount to the maximum limit on the oil dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*







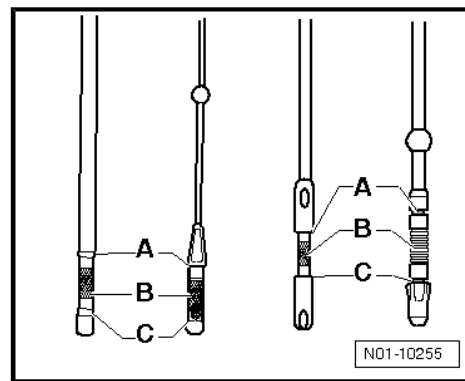
Markings on the oil dipstick

A - Do not add oil.

B - Engine oil can be filled up to the -A- range.

C - Add oil. The oil level must be at least in the upper half of the measuring range -B-.

- Drain or extract some of the oil if the oil level goes above the -A- mark to prevent damage to the catalytic converter.
- If the oil level is under the -C- mark fill the oil, minimum of 0.5 liters engine oil specification.



## 2.35 Break-Down Kit, Checking



### Note

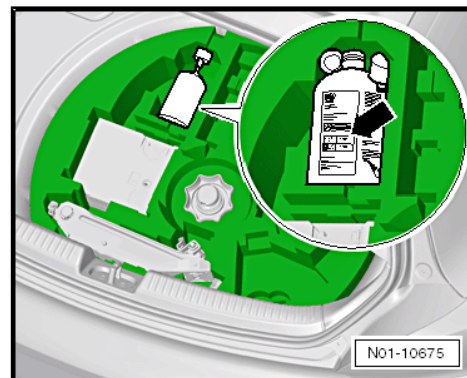
- ◆ The break-down kit is located in the spare wheel well.
- ◆ The break-down kit contains a tire inflation cylinder with tire sealant.
- ◆ The break-down set is also called the "Tire Repair Set" or "Tire Mobility System TMS".

### Expiration Date, Checking

- Check the expiration date.

The expiration date is located on a sticker on the tire sealant container -arrow-.

- Enter the expiration date in the maintenance table.
- Replace the tire sealant once the expiration date is reached. Tire sealant may not be older than 4 years.



### Note

- ◆ Replace the tire sealant if it was already used once.
- ◆ Follow all disposal regulations.



### Note

- ◆ Residual tire sealant or full bottles, which have expired, must be disposed of.
- ◆ Old tire sealant or residual sealant must not be mixed and disposed of with other fluids.

## 2.36 Panorama Sunroof, Checking Function, Cleaning and Lubricating Guide Rails and Cleaning Wind Deflector

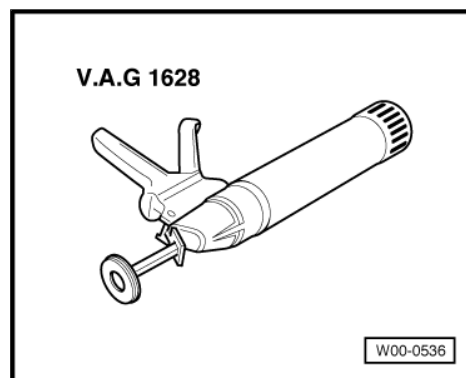
### Special tools and workshop equipment required

- ◆ Lint-free cloths
- ◆ Wet and Dry Vacuum Cleaner - VAS 5128-
- ◆ Paste - G 060 751 A2-

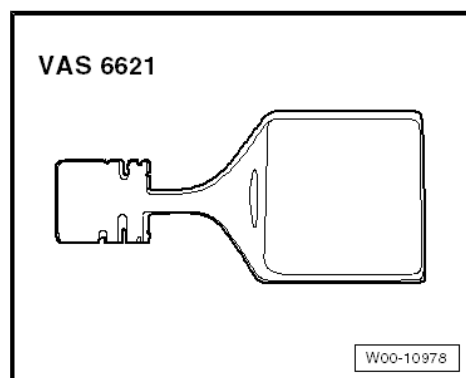




◆ Hand Cartridge Gun - V.A.G 1628-



◆ Rail Cleaner - VAS 6621-



**Note**

- ◆ *PSR stands for Panorama Sun Roof.*
- ◆ *As a rule, there is no scheduled maintenance necessary for the panorama sunroof.*
- ◆ *If there are noise complaints during the function test and if it is necessary to clean and lubricate due to dirt, then clean and lubricate the areas as follows:*
- ◆ *The specified grease is Paste - G 060 751 A2-. Do not use other lubricants.*



**Caution**

***Hold a cloth under the respective places to protect the vehicle interior from getting dirty.***

**Panorama Sunroof, Cleaning and Lubricating Guide Rails**

- Check the panorama sunroof for damage.
- Check the panorama sunroof for function and noises.
- Open the sunroof frame entirely.

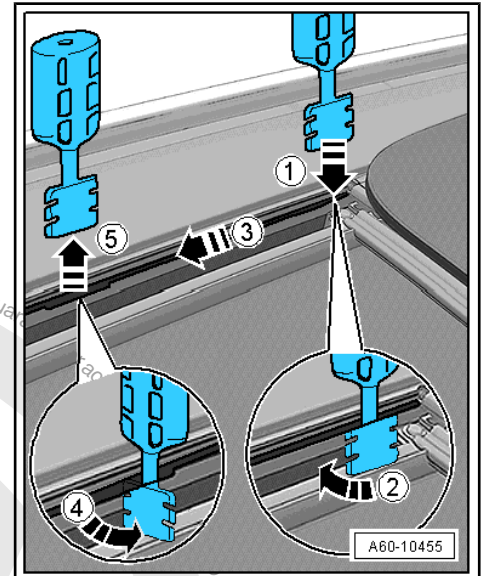
**Cleaning**

- Only use the Rail Cleaner - VAS 6621- to clean and lubricate.

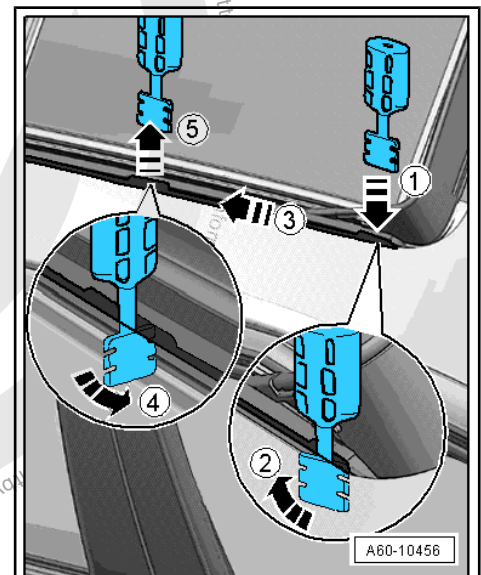




- Open the glass panel all the way.
- Rail Cleaner - VAS 6621- Insert in the rear of the guide rail -1- and turn it 90° -2-.
- Rail Cleaner - VAS 6621- guide until in the center of the guide rail in the direction of the arrow -3-.
- Rail Cleaner - VAS 6621- Turn it 90° -4- and remove the tool -5-.
- Remove the collective grease and remaining dirt from the center of the guide rail with a lint-free cloth. (If necessary, remove sand and fine pollen from the guide rails with a shop vacuum).
- Perform several times depending on the amount of debris in the opening.

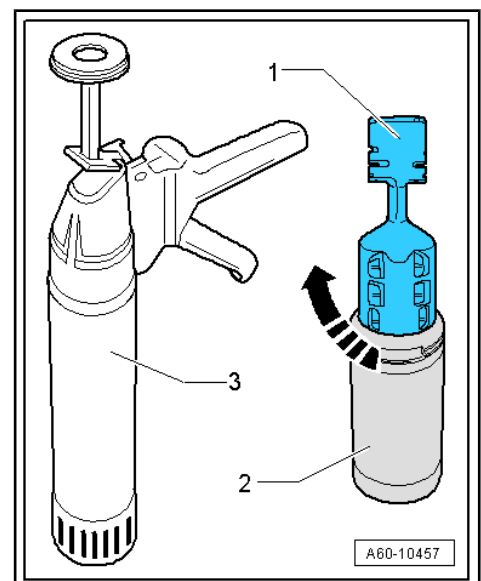


- Rail Cleaner - VAS 6621- Insert into the front area of the guide rail (near the wind deflector) -1- and turn it 90° -2-.
- Rail Cleaner - VAS 6621- guide until in the center of the guide rail in the direction of the arrow -3-.
- Rail Cleaner - VAS 6621- Turn it 90° -4- and remove the tool -5-.
- Remove the collective grease and remaining dirt from the center of the guide rail with a lint-free cloth. (If necessary, remove sand and fine pollen from the guide rails with a shop vacuum).
- Perform several times depending on the amount of debris in the opening.
- Repeat the process for the opening on the opposite side of the vehicle.



**Lubricating. Refer to .**

- Turn the Rail Cleaner - VAS 6621- -1- on the thread for the Lubricant - G 060 751 A2- for the guide rails -2- in the -direction of the arrow- and insert it into the Cartridge Gun - V.A.G 1628- -3-.







- Insert the Cartridge Gun with -VAS 6621- on the rear end of the guide rail -1- and turn it 90° -2-.
- Apply the Lubricant - G 060 751 A2- for the guide rail in the front area in the direction of the arrow -3- while operating the Cartridge Gun at the same time.
- Turn the Cartridge Gun with the Rail Cleaner - VAS 6621- 90° -4- and remove it -5-.
- Remove the excess lubricant from the guide rails with a lint-free cloth.
- Repeat the process for the opening on the opposite side of the vehicle.



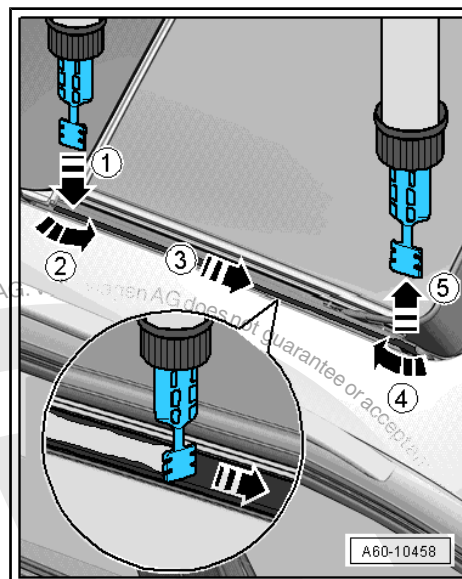
#### Note

*Make sure no other components are contaminated.*



#### Caution

*Correct any malfunctions (repair procedure).*



#### Cleaning the wind deflector:

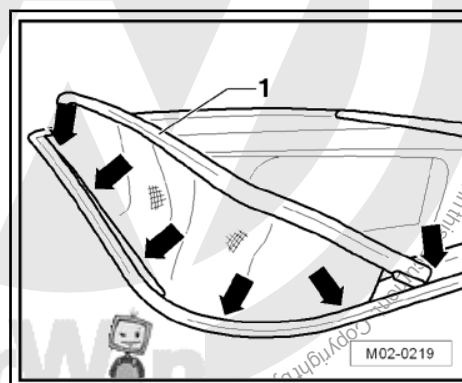
- Check the wind deflector -1- for dirt. Pay special attention to dirt build-up at the bottom of the wind deflector -arrows-.
- Remove any dirt using the Wet and Dry Shop Vacuum - VAS 5128- .
- To remove stuck insects and particles from the net and from the air deflector frame, use a sponge and soap suds.

Soap mixture ratio: 3 drops of Pril to 1 liter of water



#### Caution

*No use any standard insect remover or other solvent as these products were not tested and approved.*



- Then remove loosen insects and particles with a vacuum and a suitable vacuum tip.



#### Caution

- *The net on the wind deflector can be damaged if unsuitable spray jets are used!*

- Be careful so that no dirt falls into the vehicle.

## 2.37 Road Test

The following checks depend on the vehicle equipment level and the available testing possibilities (city or rural).

During the road test, check the following:

- Engine: Performance, stalling, idle, acceleration
- Clutch: Driving off, pedal force, smell





- Shift lever: Easy movement, shift lever position
- Automatic Transmission: Selector lever position, shift lock / ignition key interlock, shift behavior, display in instrument cluster
- Foot and parking brake: Function, free travel and effectiveness, pulling to one side, shuddering, squeal
- ABS functionality: When braking with activated ABS, the brake pedal must pulse noticeably.
- Steering: Functionality, steering free-play, steering wheel center position when driving straight ahead.
- Power roof: Function
- Radio and Radio Navigation System, Functionality, reception, speed compensated volume (SCV), objectionable noise
- Multifunction indicator (MFI): Functions
- A/C: Functionality test. (At low temperatures, test the air conditioning function in the workshop)
- Vehicle: Pulling to one side while driving straight ahead (level road)
- Imbalance: Wheels, driveshafts and propshafts
- Wheel bearings: Noise
- Engine: Hot start function

## 2.38 Wheel Bolts, Tightening to Tightening Specification

### Removing and Installing Wheel Bolt Covers

- ◆ Pull off center wheel panel: ➔ [page 147](#) .
- ◆ Remove the cap: ➔ [page 148](#) .
- ◆ Removing the wheel bolt caps: ➔ [page 148](#) .
- ◆ Anti-Theft Wheel Bolts, Loosening and Tightening: ➔ [page 148](#) .
- ◆ Tighten the wheel bolts: ➔ [page 149](#) .
- ◆ Installing the wheel center trim, wheel bolt caps and trim: ➔ [page 149](#)

### Removing the Center Wheel Trim



#### Caution

*On vehicles with alloy wheels, do not pry out center hubcap with screwdriver. Rather, use special tool designed for this purpose (puller hook in vehicle tool kit).*







Extractor -1- for removing cover cap is located in vehicle tool kit.

- Insert removal hook into one of the holes of the center hubcap and pull in -direction of arrow-.



### Remove the Cap

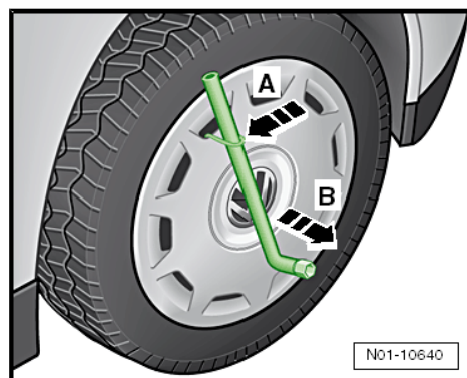
- If the vehicle has a decorative wheel hubcap, loosen the full wheel trim all around with the wire clip and wrench from the vehicle tools -arrow A- and then remove it -arrow B-.

### Removing the Wheel Bolt Caps



#### Caution

*On vehicles with alloy wheels, do not pry out wheel bolt cover caps with screwdriver. Rather, use special tool designed for this purpose (puller hook in vehicle tool kit).*

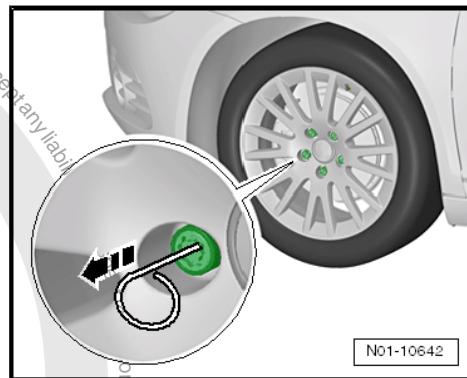


#### Note

*Wheel bolt cover caps must be removed before wheel bolts can be loosened.*

The pulling hook for removing the cover caps is located in the vehicle tool kit.

- Insert the wire through the opening in the cap.
- Remove the cap.

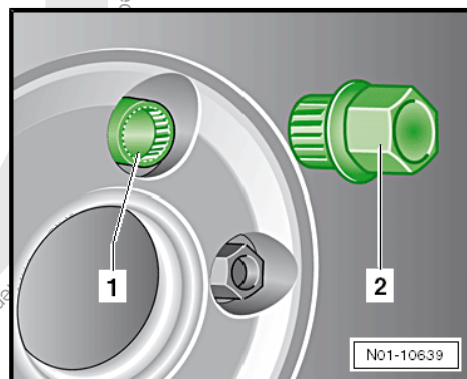


### Anti-Theft Wheel Bolts, Loosening and Tightening



#### Note

- ♦ A special adapter is required to loosen/tighten anti-theft wheel bolts. It is included in the vehicle tool kit.
- ♦ Do not use an impact wrench to loosen anti-theft wheel bolts (lockable wheel bolts).
- ♦ If the adapter to loosen/tighten the anti-theft wheel bolts is not present in the vehicle, use Master Wheel Bolt Key Set.

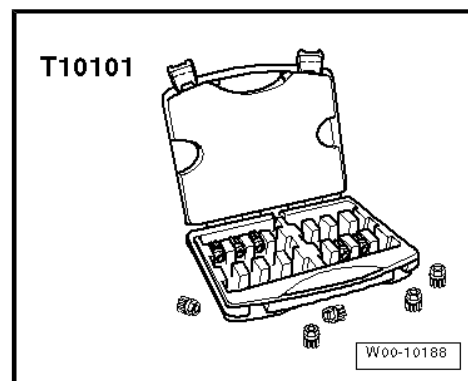


### Special tools and workshop equipment required

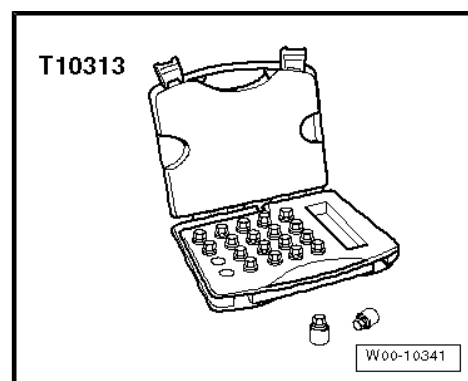




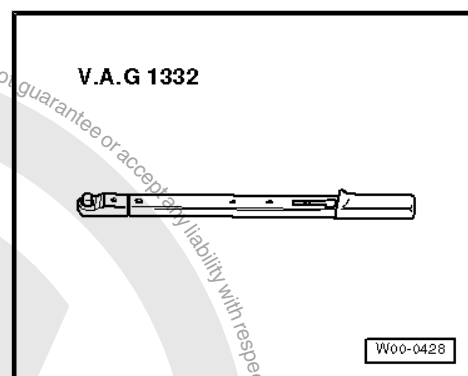
◆ Wheel Bolt Master Socket - T10101-



◆ Wheel Bolt Master Socket - T10313-



◆ Torque Wrench 40-200 Nm - V.A.G 1332-



- Slide the adapter -2- into the anti-theft wheel bolt -1-.
- Slide the wrench over the adapter -2-.

**Tightening the Wheel Bolts**

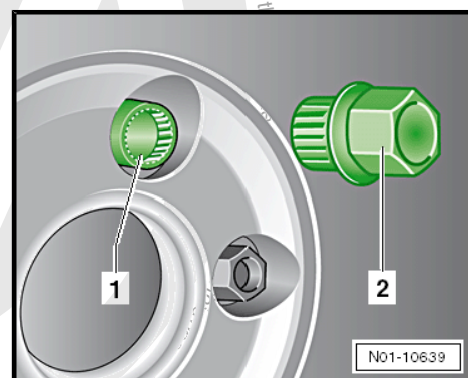
- Tighten the wheel bolts diagonally to the following tightening specification:

◆ 120 Nm



**WARNING**

*Never use an impact wrench to tighten a wheel bolt.*

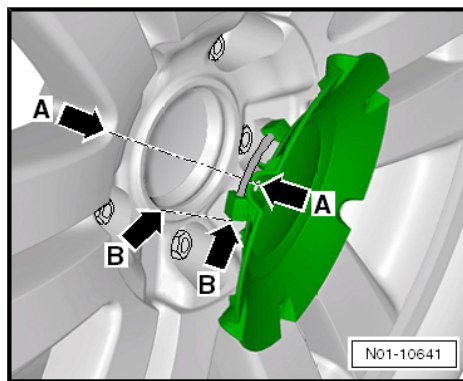


**Installing the Center Wheel Trim, Wheel Bolt Caps and Decorative Wheel Hubcap**

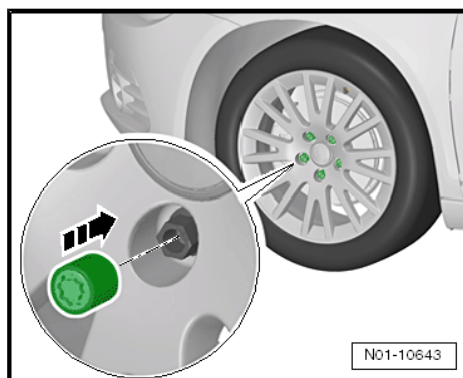




- Press the center hubcap on to the opening. Make sure -A- and B- fit exactly onto the rim.



Install the caps on the wheel bolts.



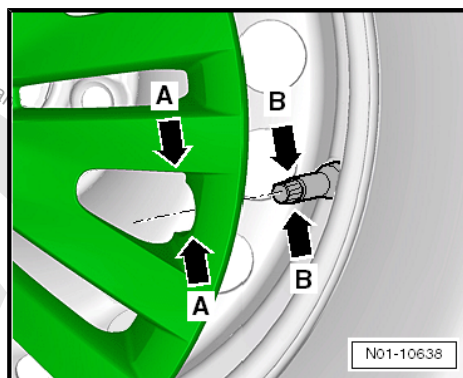
Install the wheel hubcap evenly onto the steel rim. Make sure the valve -B- is seated inside the opening -A- in the cap.



#### Note

Place the adapter and extractor back in the vehicle tool kit.

**Tightening Specification: 120 Nm**



## 2.39 Radio Code, Checking with Vehicle Diagnostic Tester

### Diagnostic Tool Access Requirements

- The diagnostic tool is connected to the central database (Carport, Fazit) via the Central Partner Network (CPN).
- The existing access authorization for the “GeKo” system




#### Note

- ♦ The radio codes can be requested in the central database and shown on the vehicle diagnostic tester display.
- ♦ To activate the radio, the codes must be entered via the radio keys, as before. Refer to  
⇒ “2.40 Radio and Radio Navigation System, Enter the PIN for the Anti-Theft Code and Assign Some Local Radio Stations to the Station Buttons”, page 151.





## Procedure

- Connect the Vehicle Diagnostic Tester. Refer to  
⇒ [“1.6 Vehicle Diagnostic Tester, Connecting”, page 15](#) .
- Switch on the ignition.
- Touch the “GUIDED FUNCTIONS” button/field on the screen.
- Press the  button to confirm.
- Select the following one after the other:
  - ◆ Brand
  - ◆ Type
  - ◆ Model year
  - ◆ Engine code
- Confirm the VIN.
- Select the following one after the other:
  - ◆ “Radio system”.
  - ◆ “Request radio code”.
- Perform code request according to instructions from “GUIDED FUNCTIONS”.
- Complete the code request as follows:
  - Press the “Go to” button -arrow- on display.
  - Press the “End” button on the display.
  - Press the “Exit” button in the “end” menu.
- Turn off the ignition and disconnect the diagnostic connector.

## 2.40 Radio and Radio Navigation System, Enter the PIN for the Anti-Theft Code and Assign Some Local Radio Stations to the Station Buttons

⇒ [“2.40.1 Volkswagen Radio and Navigation Systems”,  
page 151](#)

⇒ [“2.40.2 Blaupunkt Navigation System and Radio TravelPilot  
DX-R4 / RN S4”, page 153](#)

### 2.40.1 Volkswagen Radio and Navigation Systems

The anti-theft coding electronically prohibits unauthorized individuals from starting the unit again after it has been removed. This anti-theft code is also called the radio code of security code. Security code means that every unit with anti-theft coding has been programmed with its own code. This security code is not active from the factory. If a device card is available, the security code is on it. If the device card is not available, the safety code can be requested from the central database using the vehicle diagnostic tester . Refer to

⇒ [“2.39 Radio Code, Checking with Vehicle Diagnostic Tester”,  
page 150](#) .





## Note

*If an incorrect code is entered while canceling the electronic lock, the entire process can be repeated just one time more. If an incorrect code is entered once again, the unit will lock up for about one hour. It will not work. After an hour, during which the unit must remain switched on, the display will go out. The electronic lock can be cancelled as previously described. The cycle: 2 attempts, an hour locked, begins again.*

## Procedure

Refer to ➔ Communication; Rep. Gr. 91 ; Description and Operation ➔ for example, "RCD 500" Sound System ➔ Anti-Theft Protection ➔ Anti-Theft Protection, Deactivating

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually.

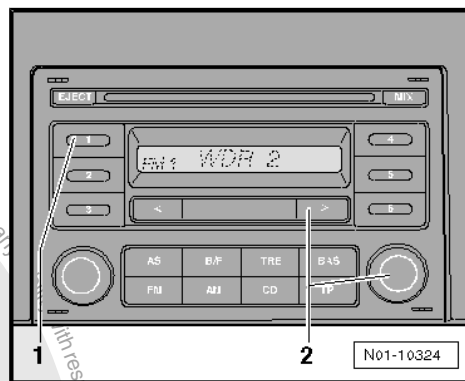
**For "Radio unit RCD 200", activate fixed code as follows:**

- Switch on radio.

"SAFE" will first appear and then after three seconds "1000" will appear.

- Enter the first digit of the four-digit code with radio station button **1**. With the second button **2** enter the second digit, etc.
- Confirm the code by pressing one of the two buttons **-2-** for 2 seconds.

The radio is ready for use.



## Note

- ◆ *If the radio was removed or if the vehicle battery was disconnected, then it is not necessary to manually enter the anti-theft code. The code number was saved after the first time it was entered.*
- ◆ *If the radio is installed in a different vehicle, then it will be necessary to manually enter the code number.*

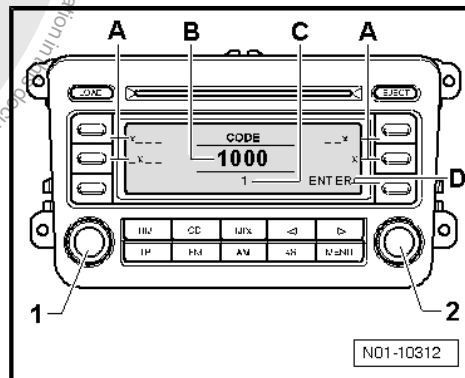
**Activate security code as follows on "RCD 300 radio system" and "RCD 500 radio system":**

- Turn on the radio/navigation system by pressing button **-1-**.
- The display will indicate "SAFE".
- After 3 seconds, "1000" will be indicated on the display.
- Enter the code number on the radio card using the multifunction buttons **-A-**.

In the display, the position of the code number that is to be set is indicated by a **-X-**, next to the four multi-function buttons.

- Press the corresponding multi-function button repeatedly until the correct number is indicated in the middle of the display **-B-**.
- If the entry has been correctly completed, press the multi-function button **-D-** next to the word "ENTER".

Radio is ready for operation again and switches into the last operating state.







**Activate fixed code for "Radio-Navigation system MFD 2" as follows:**

- Turn on the radio/navigation system by pressing button -1-.

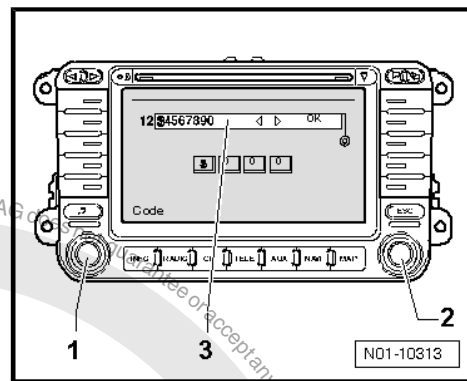
You can find the security code on the unit card.

- Enter the numeric code, by turning the button -2- until the desired number appears in the display -3-. Confirm the number and move on to the next field by briefly pressing the button.
- Confirm number code by marking "OK" in character list -3- using rotary/push knob -2- and confirm by briefly pressing knob.

If the security code was entered in the radio properly, after a short "Learning phase" the actual frequency will be displayed.

The LED at upper right of radio/navigation system must blink when ignition key is removed.

If the LED flashes, the radio/navigation system is ready for operation and the anti-theft coding is active.



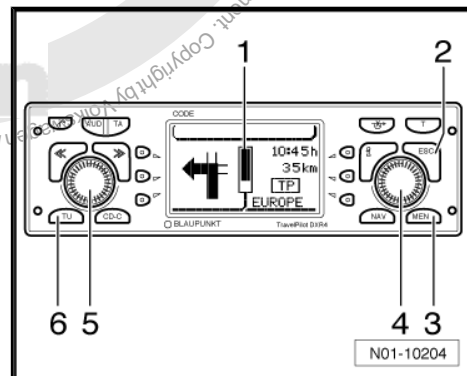
## 2.40.2 Blaupunkt Navigation System and Radio "TravelPilot DX-R4 / RN S4"

Radios/navigation systems are supplied having a fixed code. Fixed code means that every unit with anti-theft coding has been programmed with its own code. This fixed code must be activated after installation.

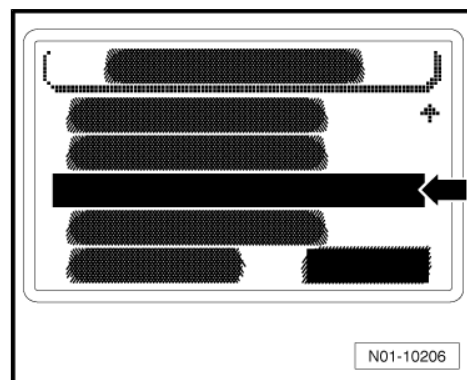
**For unit Blaupunkt "TravelPilot DX-R4 / RN S4", activate fixed code as follows:**

The security coding of the unit is not active until the code number is entered. Activate the security code as follows:

- Turn on the radio/navigation system by pressing button -5-.



- The coding is activated in the set-up menu "SECURITY" -arrow- as follows:







Start in a “base” or “function menu”.

- Press the **MEN** button -3- “TWO TIMES”.

Unit switched to Set-up Menu.

If the “settings” menu or the “navigation menu” is active:

- Press the **MEN** button -3- “ONE TIME”.

Unit switched to Set-up Menu.

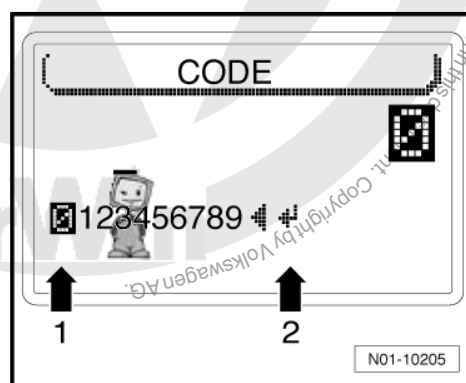
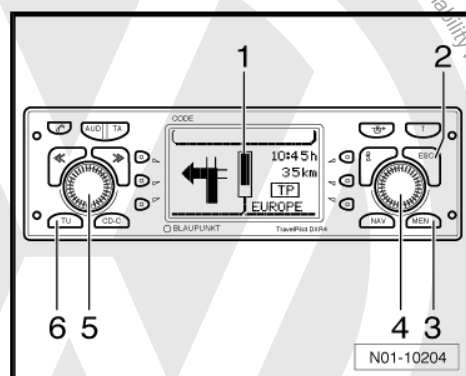
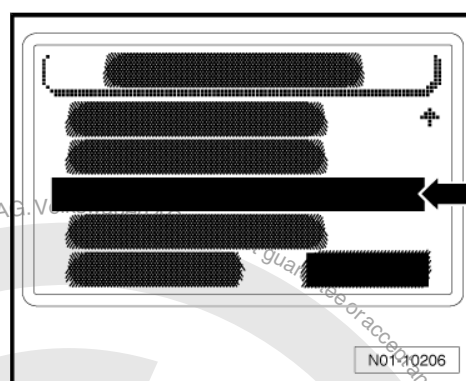
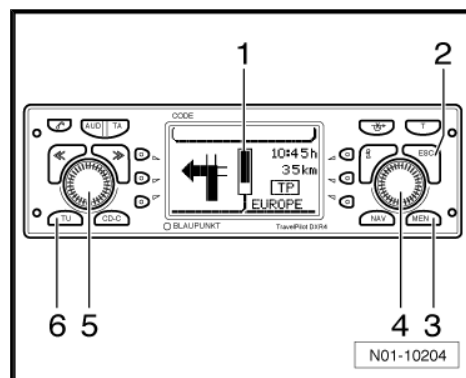
In order to perform adjustments and activate menu points,

- move the selection bar with the right turn/push button -4-.

- Select “SAFETY” -arrow-.

- In the “SAFETY” set-up menu, mark the menu point “CODE” and press the push/turn button -4-.

- Enter the number code by turning the right turn/push button in the number display -arrow 1-. Press the right turn/push knob briefly after entering each number to confirm.







## Note

If a wrong number was mistakenly entered, select the "back symbol" ←, and press the **[ESC]** button -2-.

- Perform the following:
- Enter the entire code.

- Confirm the code by marking the "return symbol" -2- by pushing the turn/push knob.

The correct code has been entered when the current state is displayed behind "CODE" after a short "adaptation phase".

- ◆ Basic setting is "OFF", i.e. code is not activated.
- ◆ Basic setting is "ON", i.e., the code is activated.

**On "Sound System" radio system for USA and Canada vehicles, activate fixed code as follows:**

Switch on radio.

The unit automatically displays "SAFE" and then "1000". It is not necessary to press any buttons.

- Enter the code number from the radio card using the radio station buttons 1 through 4. Use button 1 for the first digit of the code number, button 2 for the second digit, etc.
- Press the button "arrow" located above the "FAD" button. Hold the button until the anti-theft coding is activated. This is indicated by a short signal tone.

If the code number has been entered correctly in the radio, a radio frequency appears in the display.

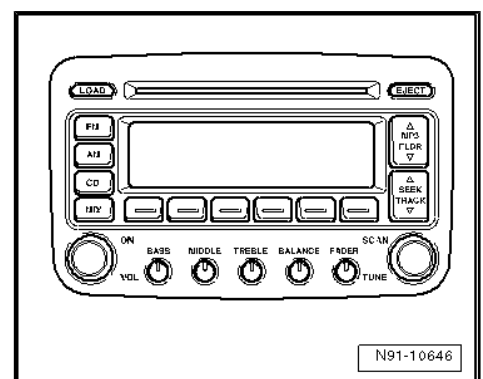
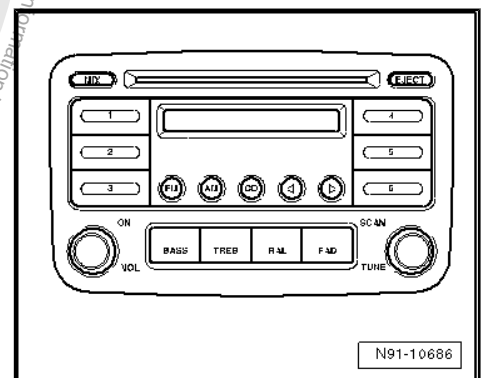
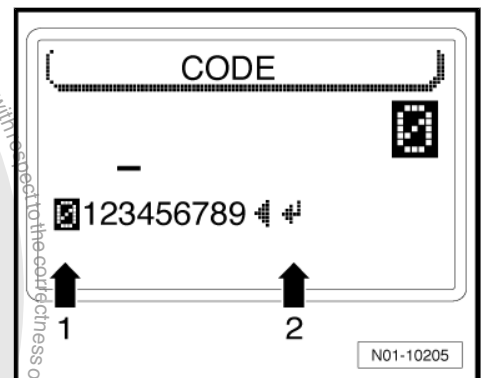
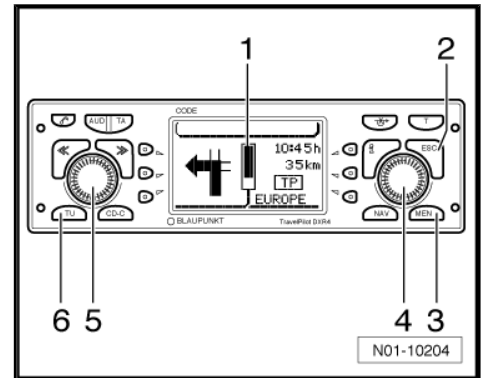
**On "Premium Sound System" radio system for USA and Canada vehicles, activate fixed code as follows:**

- Switch on radio.

The unit automatically displays "SAFE" and then "1000". It is not necessary to press any buttons.

- Enter the code number from the radio card using the radio station buttons 1 through 4. Use button 1 for the first digit of the code number, button 2 for the second digit, etc.
- Press the radio station button located under the "OK" in the display (normally this is the last radio station button). Hold the button pressed until the anti-theft coding is activated. This is indicated by a short signal tone.

If the code number has been entered correctly in the radio, a radio frequency appears in the display.







## 2.41 Tire Pressure Monitoring Display, Perform the basic setting

Applies only to Tire Pressure Monitoring System Display with PR number 7K6

Tire Pressure Monitoring System for North America. Refer to ["2.41.1 Tire Pressure Monitoring System for North America", page 157](#).



### Note

- ◆ Perform the basic setting on the Tire Pressure Monitoring System Display only "after" the tire pressures have been adjusted to the correct values.
- ◆ If no pressure loss and no tire damage is detected after a tire pressure warning, the erroneous warning can be eliminated by a basic setting.

The Tire Pressure Monitoring System Display compares the speed and the rolling circumference on each wheel using the ABS sensors. The tire pressure monitoring system display shows when there is a difference in the rolling circumference on a wheel. The rolling circumference changes when:

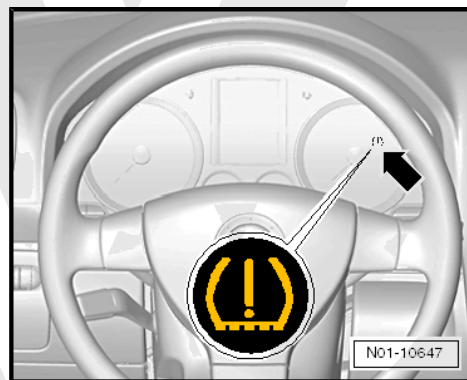
- ◆ the tire pressure is too low.
- ◆ Tires have structural damage.
- ◆ Vehicle is loaded on one side.
- ◆ wheels of one axle are loaded higher, for example, when towing trailer or driving uphill and downhill.
- ◆ Snow chains are installed.
- ◆ Spare wheel is installed.
- ◆ One wheel per axle was replaced.

The yellow Tire Pressure Monitoring System Display Indicator Lamp is inside the instrument cluster -arrow-.

- ◆ "BLINKING LIGHT" means that no "INITIAL BASIC SETTING" was performed yet.
- ◆ "STEADY LIGHT", in conjunction with a warning tone, indicates "WARNING", a loss of pressure has been recognized, check tire pressure, perform system basic setting.

### Performing "INITIAL" Basic Setting:

- Switch on the ignition.
- Press both the **ESP** and **SET** buttons in the center console at the same time for longer than 2 seconds.







If the **SET** button is not in the center console, then it will be inside the glove compartment.

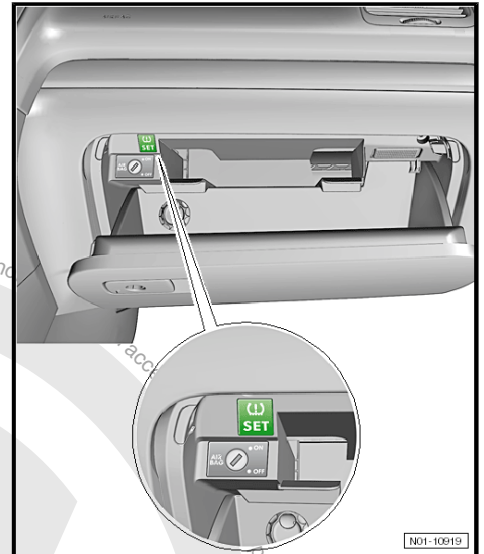
If the vehicle does have ESP, then press the **ASR** button.

Beginning of basic setting is confirm by a notifying tone.

On next new ignition start, warning does not appear.

#### Perform the basic setting

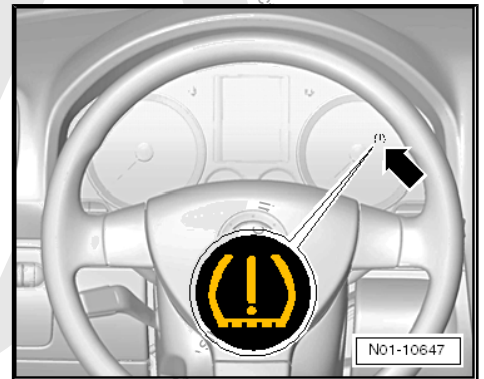
- Switch on the ignition.
- Press the **SET** button, either in the center console or in the glove compartment, for longer than 2 seconds.



The Tire Pressure Monitoring System Display Indicator Lamp in the instrument cluster -arrow- stays on as long as the button is pressed.

Beginning of basic setting is confirm by a notifying tone.

On next new ignition start, warning does not appear.



### 2.41.1 Tire Pressure Monitoring System for North America



#### Note

- ◆ *Basic setting of Tire Pressure Monitoring Display Indicator Lamp should always only be performed, after tire inflation pressure values have first been corrected to the proper values.*
- ◆ *If no pressure loss and no tire damage is detected after a tire pressure warning, the erroneous warning can be eliminated by a basic setting.*





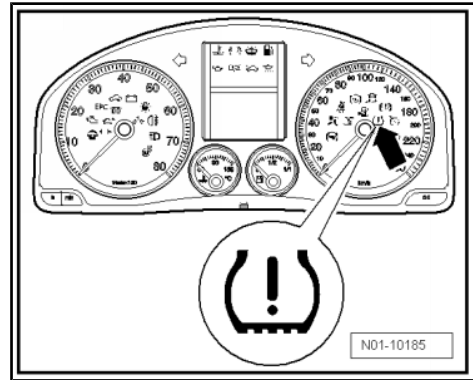
The yellow Tire Pressure Monitoring System Display Indicator Lamp - K220- is inside the instrument cluster -arrow-.

Perform the following adaptation after changing tire pressures or replacing one or more wheels:

- Connect the Tire Pressure Monitoring System Display Indicator Lamp - 5051- or newer model. Refer to ➔ [“1.6 Vehicle Diagnostic Tester, Connecting”, page 15](#) .
- Switch on the ignition.
- Touch the **GUIDED FAULT FINDING** button/field on the screen.
- Select vehicle data.

All control modules present are interrogated.

- Follow the instructions in “Guided Fault Finding” on the Vehicle Diagnosis, Testing and Information System - 5051- or subsequent unit.



## 2.42 Tire Pressure Sensor, Removing and Installing

Tire pressure sensors must be replaced only for “Tire pressure monitoring system” with PR number 7K3. The system “Tire monitor indicator” with PR number 7K6 offered in parallel does not have tire pressure sensors. TPMS compares the speed, or example the rolling circumference of the individual wheels using the ABS sensors.

see also the Self Study Program. Refer to Self Study Program 347.



### Note

- ♦ *Tire pressure sensor is located on inside of disc wheel or rim.*
- ♦ *For removal and installation of tire pressure sensor, wheel and tire must be separated.*
- Refer to ➔ Suspension, Wheels, Steering; Rep. Gr. 44 ; Removal and Installation .

## 2.43 Windshield Wiper and Washer System and Headlamp Washer System, Checking Functionality

➔ [“2.43.1 Windshield Washer Fluid, Checking Freeze Protection and Filling”, page 158](#)

➔ [“2.43.2 Windshield Washer System Checking and Adjusting Spray Nozzles”, page 160](#)

➔ [“2.43.3 Headlamp Washer System, Checking Spray Nozzle Setting”, page 161](#)

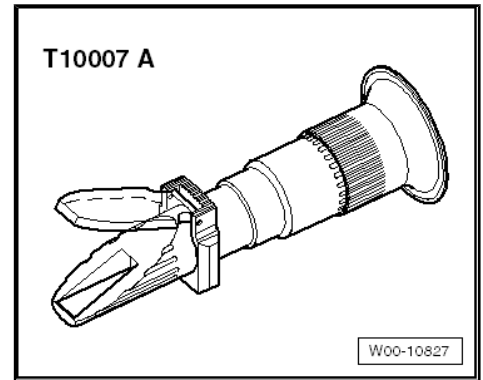
### 2.43.1 Windshield Washer Fluid, Checking Freeze Protection and Filling

Special tools and workshop equipment required





◆ Refractometer - T10007 A-

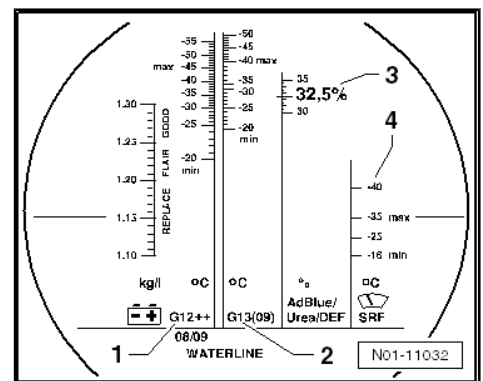


Read the bright/dark boundary to obtain an accurate reading for the following tests. Place a drop of water on the glass to improve the readability of the bright/dark boundary. The bright/dark boundary can be clearly recognized on the "WATERLINE".

- Check concentration of anti-freeze additive using Refractometer - T10007 A- .

The scale -4- of the refractometer is designed specifically for Windshield Washer Concentrate - G 052 164- .

**Mixture Ratio:**



Freeze protection to	Windshield washer fluid concentrate G 052 164	Water
1.4/-0.4 °F (-17/-18 °C)	1 part	3 part
7.5/9.5 °F (-22/-23 °C)	1 part	2 part
34.5/36.4 °F (-37/-38 °C)	1 part	1 part

Filling-up with fluid:

The windshield washer system fluid reservoir must be filled.

Use only Windshield Washer Fluid Concentrate - G 052 164- all-year-round.





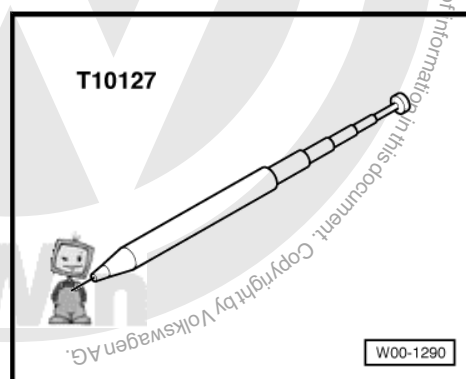
#### Note

- ◆ *The Windshield Washer Concentrate - G 052 164- protects the spray jets, fluid reservoir and hoses from freezing.*
- ◆ *All vehicles with fan type spray jets must be filled with Windshield Washer Fluid Concentrate - G 052 164- because this fluid has a low viscosity at negative temperatures. The complicated spray jet system could otherwise become blocked due to crystallized washer fluid that can affect the fan pattern of the spray nozzle. Windshield Washer Fluid Concentrate - G 052 164- assures that the nozzles remain functional even at very low temperatures.*
- ◆ *Use Windshield Washer Fluid Concentrate - G 052 164- in the warm season as well. The powerful cleanser removes wax and oil deposits from the windows.*
- ◆ *Freeze protection (anti-freeze) must be guaranteed to approximately -13° F (-25 °C) (approximately -31° F (-35 °C)). in countries with an arctic climate) in the washer system.*

### 2.43.2 Windshield Washer System Checking and Adjusting Spray Nozzles

#### Special tools and workshop equipment required

- ◆ Adjustment Tool - T10127- equipped with needle 3125/ 5 A

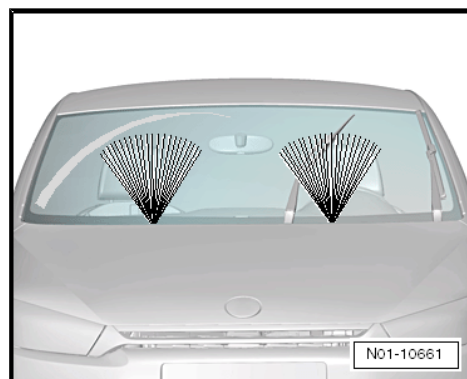


#### Note

*In cases where contamination in spray jet results in an uneven spray pattern, remove the spray jet and rinse it with water in the opposite direction of the spray flow. Subsequently blowing through in the opposite direction of the spray flow with compressed air is permitted. Do not use any other objects to clean the spray nozzles.*

#### Windshield Spray Nozzle Adjustment:

The washer nozzles are preset. Small height adjustments can be made.





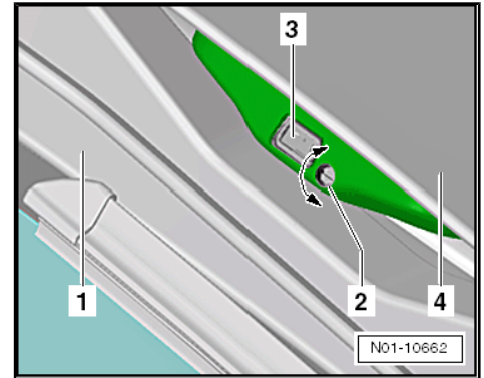


- If both spray fields are not at same height, adjust spray direction upward or downward as follows:

- 1 - Cowl plate in front of front window
- 2 - Adjuster TORX size 8
- 3 - Fan-type nozzle
- 4 - Hood

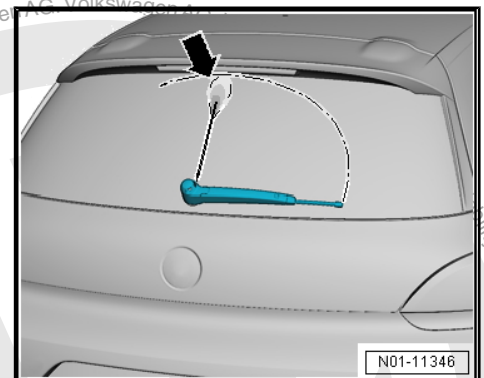
- Adjust the spray nozzle -3- by turning at the adjuster -2- with a TORX screwdriver.

- ◆ “Clockwise” deeper adjustment.
- ◆ “Counter-clockwise” higher adjustment.



#### Rear Window Washer Nozzle Adjustment

- Adjust nozzle with Adjustment Tool - T10127- so that fluid sprays onto upper third of rear window, as shown.



### 2.43.3 Headlamp Washer System, Checking Spray Nozzle Setting



#### Caution

*The spray nozzles can be checked for functionality, but they cannot be adjusted.*

#### Spray Jet Setting, Checking

- Turn on the low beam.
- Operate the windshield washer.

Headlamps are washed, if windshield wiper lever is held at least 1.5 seconds in “wiping position”

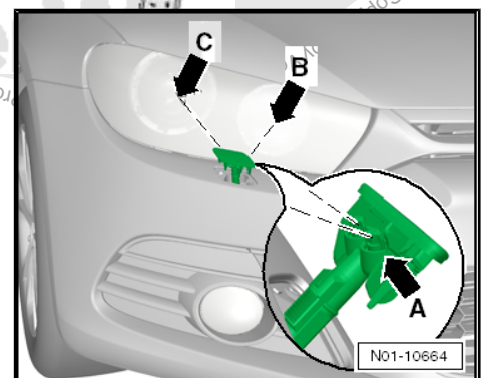
The spray must hit the headlamp glass directly in the center -B- and -C-.

If the spray pattern differs from the specification, perform a repair.



#### Note

*The test diagram is also for vehicles with Halogen headlamps.*







## 2.44 Windshield Wiper Blades, Checking End Position

⇒ [“2.44.1 Windshield Wiper Blades, Checking End Position”, page 162](#)

⇒ [“2.44.2 Rear Windshield Wiper Blades, Checking Park Position, Golf Wagon from MY 2007”, page 162](#)

### 2.44.1 Windshield Wiper Blades, Checking End Position

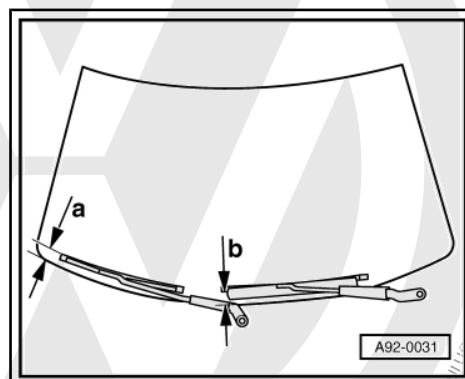


#### Note

- ◆ *Every second time it is switched off, the wiper motor runs to an over-stroke parked position, that ensures that the lip of the wiper blade is flipped to the other direction.*
- ◆ *For this to happen, the wiper motor runs downward to the end position and then back up again very slightly. This over-stroke parked position must not be used for aligning/checking the wiper crank.*
- ◆ *To check, use the parked position for which the wiper motor only travels to the end position without over-stroking. If necessary, operate the mist wipe function once more.*

- Switch windshield wipers on and off and allow to run to end position.
- Turn off ignition.
- Check if the windshield wiper blade tips are positioned with the following distances to the plenum chamber cover at the bottom of the windshield:
  - ◆ Dimension -a- = 0 to 10 mm
  - ◆ Dimension -b- = 10 to 20 mm
- If necessary, adjust wiper arm:

Adjust windshield wiper blades. Refer to ⇒ Electrical Equipment; Rep. Gr. 92 ; General Information .



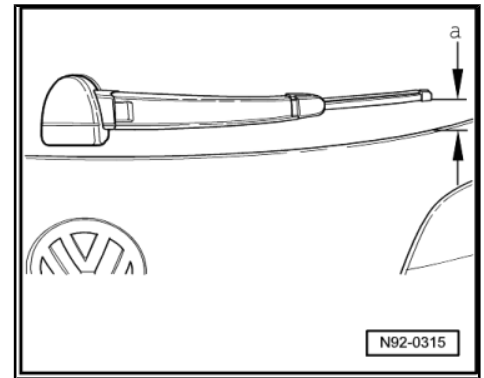
### 2.44.2 Rear Windshield Wiper Blades, Checking Park Position, Golf Wagon from MY 2007

- Switch rear windshield wipers on and off and allow to run to end position.





- Check whether blade points rest in with the following distance to lower edge of window.
- ◆ Dimension -a- = 15 + 5 mm
- If necessary, adjust wiper arm, refer to ➔ Electrical Equipment; Rep. Gr. 92 ; General Information .



## 2.45 Windshield Wiper Protectors, Removing

⇒ ["2.45.1 General Information", page 163](#)

⇒ ["2.45.2 Windshield Wiper Protectors, Version 1, Removing", page 164](#)

⇒ ["2.45.3 Windshield Wiper Protectors, Version 2, Removing", page 165](#)

⇒ ["2.45.4 Wiper Blade Protector, Type 3, Transport Wiper Blade, Removing and Installing", page 165](#)

### 2.45.1 General Information



#### Note

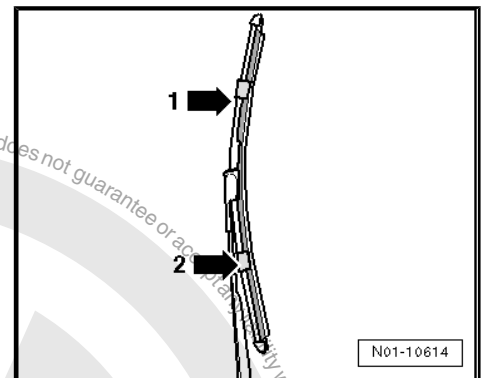
*There are 3 types of windshield wiper protectors.*

#### 1. Wiper blade with a protective rail and two fasteners

- ◆ Can be recognized by the protective rails with the 2 fasteners -arrows 1 + 2-

Refer to

⇒ ["2.45.2 Windshield Wiper Protectors, Version 1, Removing", page 164](#) .

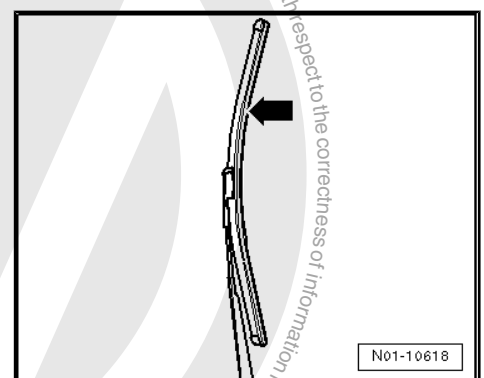


#### 2. Wiper blade with protective rail, which can be pushed on

- ◆ can be recognized in that the protective rail -arrow- is pushed onto the wiper blade

Refer to

⇒ ["2.45.3 Windshield Wiper Protectors, Version 2, Removing", page 165](#) .





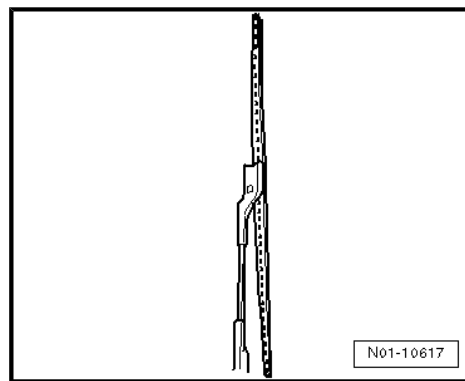


### 3. Transport wiper blade

- ◆ Can be recognized in that it does not have a wind deflector; it must be exchanged for the standard wiper blade.

Refer to

⇒ **"2.45.4 Wiper Blade Protector, Type 3, Transport Wiper Blade, Removing and Installing", page 165**.



### 2.45.2 Windshield Wiper Protectors, Version 1, Removing

- With the engine hood closed, switch the ignition on and off briefly.
- Within 10 seconds after switching off the ignition, move the windshield wiper lever downward to the mist wipe position.

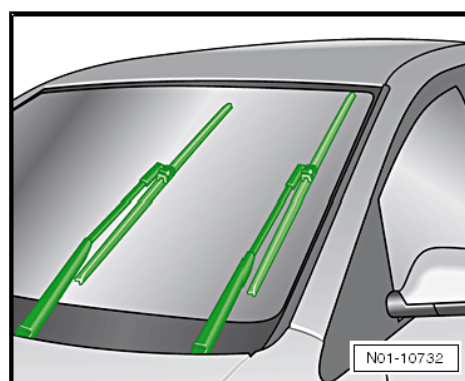
Move the wiper into the service position.

- Lift the wiper arm off the glass.

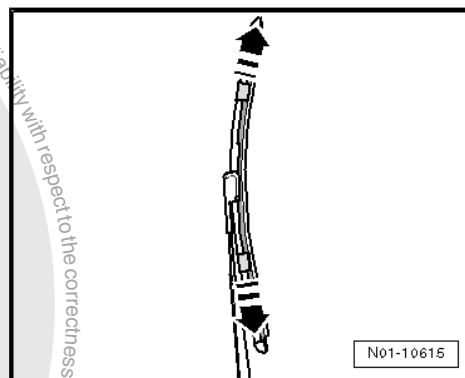


**Caution**

***Do not hold the wiper blade to prevent damage.***

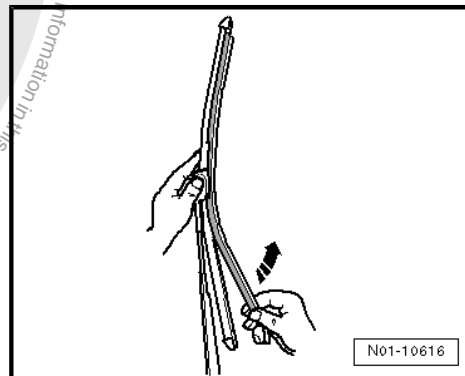


- Remove the upper and lower fasteners -arrows-.



Remove the protective rail off the wiper blade as illustrated.

- Carefully place the wiper arm back on the windshield.
- Move the wipers into the end position: turn on the ignition and operate the windshield wiper lever briefly. Turn off the ignition.







### 2.45.3 Windshield Wiper Protectors, Version 2, Removing

- With the engine hood closed, switch the ignition on and off briefly.
- Within 10 seconds after switching off the ignition, move the windshield wiper lever downward to the mist wipe position.

Move the wiper into the service position.

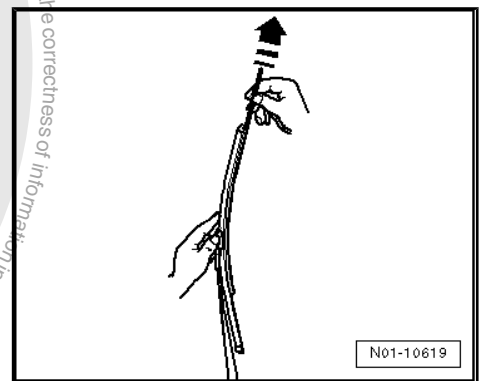
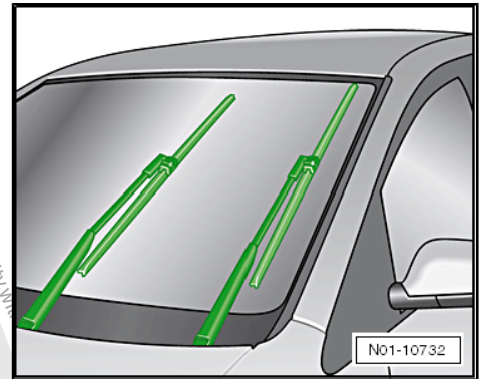
- Lift the wiper arm off the glass.



#### Caution

***Do not hold the wiper blade to prevent damage.***

- Remove the protective rail off the wiper blade as illustrated.
- Carefully place the wiper arm back on the windshield.
- Move the wipers into the end position: turn on the ignition and operate the windshield wiper lever briefly. Turn off the ignition.

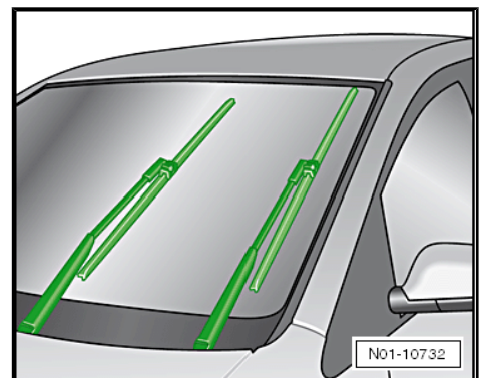


### 2.45.4 Wiper Blade Protector, Type 3, Transport Wiper Blade, Removing and Installing

- With the engine hood closed, switch the ignition on and off briefly.
- Within 10 seconds after switching off the ignition, move the windshield wiper lever downward to the mist wipe position.

Move the wiper into the service position.

- Lift the wiper arms off the glass.





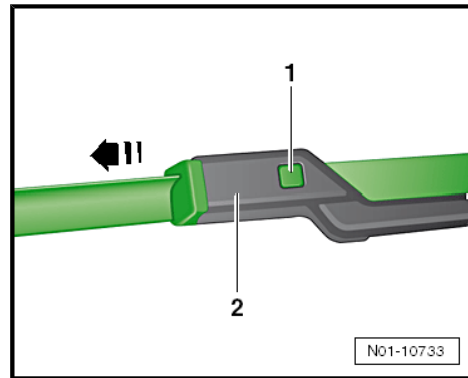


- Depending on the version, turn the wiper blade so that the lip faces up and then remove it. Press the lock -1- in the retainer -2- and loosen the wiper blade on the linkage and then remove the wiper blade.
- Slide the wiper blade into the retainer making sure it audibly locks into place. Or turn the wiper blade with the lip facing down.



#### Caution

**Do not hold the wiper blade to prevent damage.**



- Carefully place the wiper arm back on the windshield.
- Move the wipers into the end position: turn on the ignition and operate the windshield wiper lever briefly. Turn off the ignition.

## 2.46 Headlamps, Halogen Headlamps and Fog Lamps, Checking and Adjusting

⇒ [“2.46.1 Checking and Adjusting Conditions”, page 166](#)

⇒ [“2.46.2 Headlamp Adjustment, Checking, with Test Screen without 15° Adjustment Line”, page 167](#)

⇒ [“2.46.3 Halogen Headlamps, Adjusting”, page 168](#)

⇒ [“2.46.4 Adjusting Fog Lamps”, page 169](#)

### 2.46.1 Checking and Adjusting Conditions

- ◆ Tire pressure OK
- ◆ Lenses must not be damaged or dirty.
- ◆ Reflectors and bulbs OK
- ◆ Vehicle must be properly loaded.
- ◆ Move vehicle back and forth for 1 meter (3 to 4 feet) or bounce front and rear of vehicle several times up and down to settle suspension.
- ◆ Both the vehicle and the headlamp adjusting unit must be standing on flat ground → Operating Instructions for headlamp adjusting units VAS 5046, VAS 5047, VAS 5208A, VAS 5209A, and VAS 5209B.
- ◆ Vehicle and headlamp adjuster must be aligned.
- ◆ Inclination dimension must be set.



#### Note

*Later headlamp adjustment is not permitted on North America vehicles. These vehicles have a anti-twist mechanism.*

In the trim above the headlamp, inclination measurements are stamped in “%”. Headlamps must be adjusted according to this information. Percentage information is based on a projection distance of 10 meters. For example: inclination of 1.0 % converts to approximately 10 cm.

Adjust the headlamps to a 0.7% angle dimension on North America vehicles.

Fog lamp angle dimension: 2.0 %.





#### Note

*For certain markets, no manual headlamp range control is offered with halogen headlamps.*

- Check the headlamp height adjustment by setting to the maximum level and observing the light.
- The headlamp range adjuster thumb wheel, if present, must be in “0”.

Load: Vehicle must be loaded with one person on the driver seat, weighing 200 lbs (75 kg), otherwise vehicle must be empty (curb weight).

The curb weight is the weight of the vehicle ready for operation with completely filled fuel tank (at least 90%), including the weight of all equipment items carried for operation (for example spare wheel, tool, vehicle jack, fire extinguisher etc.).

If the fuel tank is not at least 90% full, adjust weight as follows:

- Read fuel level from fuel gauge. Calculate additional weight needed using the following table. Place extra weight in luggage compartment.

**Tank Filling Table**

Fuel gauge level	Additional weight in luggage compartment in lbs (kg)
Up to 1/4	66 (30)
Up to 1/2	44 (20)
Up to 3/4	22 (10)
full	0

Example:

If the fuel tank is half full, place an additional 66 lbs (25 kg) or 33 lbs (15 kg) weight in the luggage compartment.



#### Note

- ◆ *For the additional weight, use a suitable container filled with water or gravel (a 5 liter fuel can filled with water weighs approximately 11 lbs (5 kg)).*
- ◆ *Make sure there are lbs (kg) markings on the container and that it cannot be opened.*
- ◆ *Place a cloth on the luggage compartment floor to protect it from getting dirty.*

### 2.46.2 Headlamp Adjustment, Checking, with Test Screen without 15° Adjustment Line

Test diagram for low beam. Refer to [⇒ page 168](#)

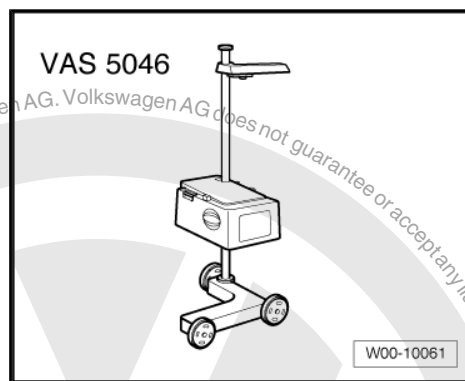
Test diagram for fog light. Refer to [⇒ page 168](#)

**Special tools and workshop equipment required**





◆ Headlamp Adjuster - VAS 5046A-

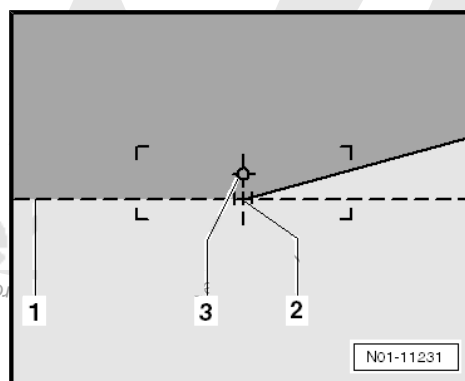


- ◆ Headlamp Adjuster - VAS 5047A-
- ◆ Headlamp Adjuster - VAS 5208A-
- ◆ Headlamp Adjuster - VAS 5209A-
- ◆ Headlamp Adjuster - VAS 5209B-

### Test Diagram for Low Beam

Check the following:

- With the dipped beam switched on check whether the horizontal light-dark border of the setting line -1- contacts the test surface.
- Check whether the break-away point -2- between the left horizontal part and the rising part on the right of the light-dark border runs vertically through the central point -3-. The bright core of the light beam must be on the right of the vertical line.



### Note

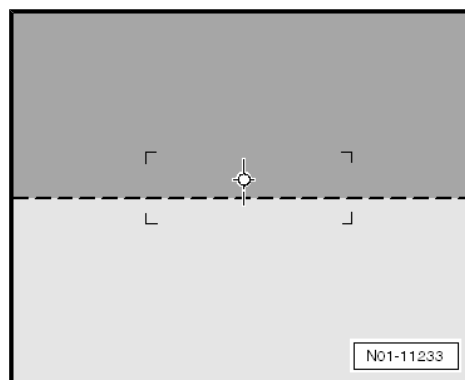
- ◆ To make it easier to find break-away point -2- cover and uncover left half of headlamp (as viewed when looking forward) a few times. Then check dipped beam again.
- ◆ After correct adjustment of dipped beams the center point of the main beam must lie on the center mark -3-.

### Test Diagram for Fog Light

- Check whether the upper light-dark border touches the setting line and runs across the complete test screen width horizontally.

### Other Additional Head Lamps

Accessory auxiliary headlamp systems must be checked and adjusted according to the guidelines valid for them.



## 2.46.3 Halogen Headlamps, Adjusting

### Note

Make sure both headlamps work identically when operating the manual headlamp range control.





- Adjust the angle dimension on the headlamp adjusting unit.
- The angle dimension for headlamps with Halogen bulbs: “1.0 %”



#### Note

Percentage information is based on a projection distance of 10 meters.



#### WARNING

*If the vehicle is a hybrid, then inspect all hybrid specific components. Refer to ➔ “2.21 Hybrid Components, Checking for Damage to High Voltage Components and Cables”, page 90 .*

*Contact to the responsible high voltage technician is something needs clarification.*

#### Adjust the Right Headlamp:

Adjustment screws for left headlamp are arranged symmetrically.

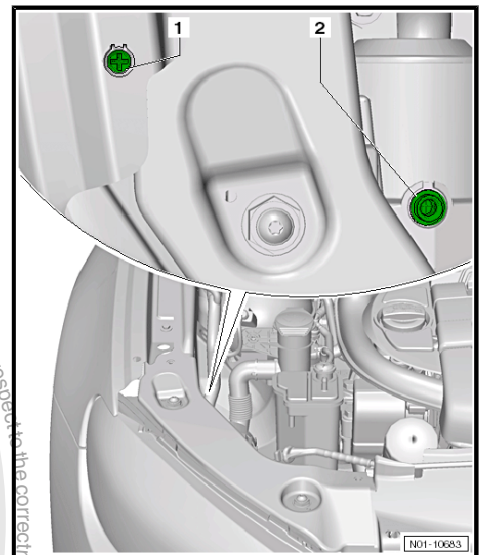
- ◆ Adjustment screw (inner hexagon) for side adjustment of low beam bright/dark boundary -1- (sealed on USA and Canada vehicles)
- ◆ Adjustment screw (inner hexagon) for height adjustment of low beam bright/dark boundary -2-.
- Turn the adjustment screw for height adjustment -2- until the correct setting is achieved.



#### Note

*In some markets the adjusting screw for the side adjustment -1- is sealed. Lateral adjustment is not permitted.*

- Turn the adjustment screw for lateral adjustment -1- until the correct setting is achieved.
- Then the side adjustment must be checked and correct with adjustment screw -1- if necessary.



### 2.46.4 Adjusting Fog Lamps

Adjusting fog lamps and other auxiliary headlamps: Golf wagon from 2007, Jetta from 2005 ➔ [page 169](#)

Adjusting fog lamps and other auxiliary headlamps: Golf wagon from 2010, Jetta from 2011 ➔ [page 170](#)

**Adjusting Fog Lamps and Other Auxiliary Headlamps: Golf Wagon from 2007, Jetta from 2005**

Right fog light in bumper:

Adjusting screw on left fog light is arranged symmetrically.

- Adjust the angle dimension on the headlamp adjusting unit.
- Fog lamp angle dimension: “2.0%”





#### Note

Percentage information is based on a projection distance of 10 meters.

- Remove the screw -1- 1.5 Nm.
- Turn the air grille carefully in the -direction of the arrow- so that the outer retaining tabs -2- do not break.



#### Note

Retaining tabs are partially seated very securely. Therefore, be very careful when removing cover to avoid breaking retaining tabs.

- Turn the adjusting screw -arrow A- to adjust the beam height.
- Secure the air grille reverse order of removal.
- Tighten the air grille screw -1- to 1.5 Nm.

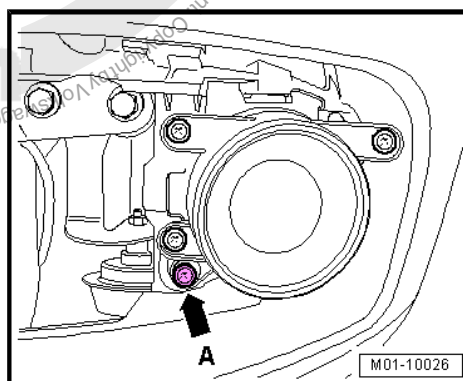
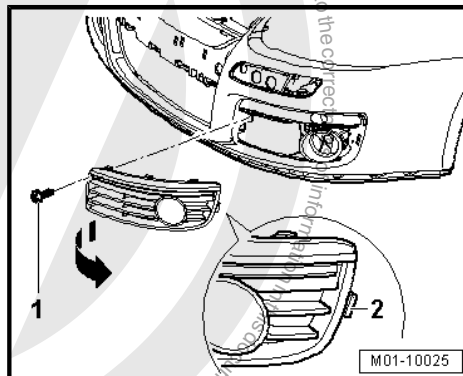
Lateral adjustment is not possible.

#### Adjusting Fog Lamps, Golf Wagon from 2010, Jetta from 2011

Right fog light in bumper:

Adjusting screw on left fog light is arranged symmetrically.

- Adjust the angle dimension on the headlamp adjusting unit.
- Fog lamp angle dimension: "2.0°"

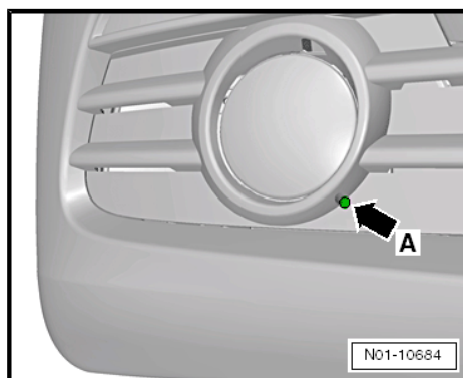


#### Note

Percentage information is based on a projection distance of 10 meters.

- Turn the adjusting screw -arrow A- to adjust the beam height.

Lateral adjustment is not possible.







## 2.47 Headlamps, Headlamps, Check HID Headlamps and Aim if Necessary

⇒ [“2.47.1 Test Requirements”, page 171](#)

⇒ [“2.47.2 Headlamp Adjustment, Checking, with Test Screen without 15° Adjustment Line”, page 172](#)

⇒ [“2.47.3 HID Headlamps, Aiming”, page 174](#)

### 2.47.1 Test Requirements

- ◆ Tire pressure OK
- ◆ Lenses must not be damaged or dirty.
- ◆ Reflectors and bulbs OK
- ◆ Vehicle must be properly loaded.
- ◆ Move vehicle back and forth for 1 meter (3 to 4 feet) or bounce front and rear of vehicle several times up and down to settle suspension.
- ◆ Both the vehicle and the headlamp adjusting unit must be standing on flat ground → Operating Instructions for headlamp adjusting units VAS 5046, VAS 5047, VAS 5208A, VAS 5209A, and VAS 5209B.
- ◆ Vehicle and headlamp adjuster must be aligned.
- ◆ Inclination dimension must be set.
- ◆ The DTC memory must be erased.



#### Note

*Later headlamp adjustment is not permitted on North America vehicles. These vehicles have a anti-twist mechanism.*

In the trim above the headlamp, inclination measurements are stamped in “%”. Headlamps must be adjusted according to this information. Percentage information is based on a projection distance of 10 meters. For example: inclination of 1.0 % converts to approximately 10 cm.

Adjust the headlamps to a 0.7% angle dimension on North America vehicles.

Load: Vehicle must be loaded with one person on the driver seat, weighing 200 lbs (75 kg), otherwise vehicle must be empty (curb weight).

The curb weight is the weight of the vehicle ready for operation with completely filled fuel tank (at least 90%), including the weight of all equipment items carried for operation (for example spare wheel, tool, vehicle jack, fire extinguisher etc.).

If the fuel tank is not at least 90% full, adjust weight as follows:

- Read fuel level from fuel gauge. Calculate additional weight needed using the following table. Place extra weight in luggage compartment.

#### Tank Filling Table

Fuel gauge level	Additional weight in luggage compartment in lbs (kg)
Up to 1/4	66 (30)
Up to 1/2	44 (20)





Fuel gauge level	Additional weight in luggage compartment in lbs (kg)
Up to 3/4	22 (10)
full	0

Example:

If the fuel tank is half full, place an additional 66 lbs (25 kg) or 33 lbs (15 kg) weight in the luggage compartment.



#### Note

- ◆ For the additional weight, use a suitable container filled with water or gravel (a 5 liter fuel can filled with water weighs approximately 11 lbs (5 kg)).
- ◆ Make sure there are lbs (kg) markings on the container and that it cannot be opened.
- ◆ Place a cloth on the luggage compartment floor to protect it from getting dirty.

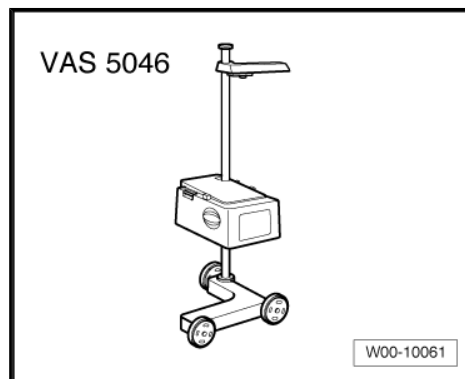
### 2.47.2 Headlamp Adjustment, Checking, with Test Screen without 15° Adjustment Line

Test diagram for low beam version 1: ➤ [page 172](#)

Test diagram for low beam version 2: ➤ [page 173](#)

#### Special tools and workshop equipment required

- ◆ Headlamp Adjuster - VAS 5046A-



- ◆ Headlamp Adjuster - VAS 5047A-
- ◆ Headlamp Adjuster - VAS 5208A-
- ◆ Headlamp Adjuster - VAS 5209A-
- ◆ Headlamp Adjuster - VAS 5209B-
- ◆ Vehicle Diagnostic Tester

#### Test Diagram for Low Beam Version 1:

Check the following:



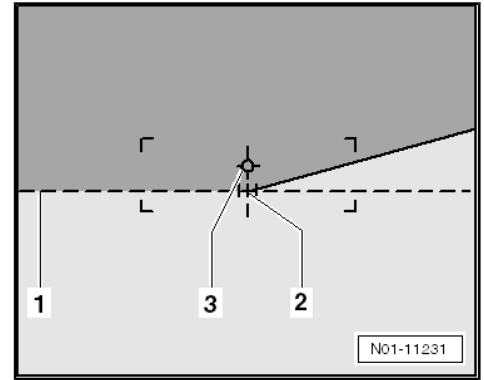


- With the low beam switched on check whether the horizontal light-dark border of the setting line -1- contacts the test surface.
- Check whether the break-away point -2- between the left horizontal part and the rising part on the right of the light-dark border runs vertically through the central point -3-. The bright core of the light beam must be on the right of the vertical line.



#### Note

- ◆ *To make it easier to find break-away point -2- cover and uncover left half of headlamp (as viewed when looking forward) a few times. Then check low beam again.*
- ◆ *After correct adjustment of low beams the center point of the main beam must lie on the center mark -3-.*



#### Test Diagram for Low Beam Version 2:

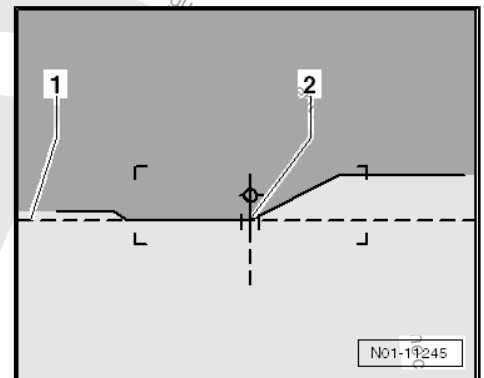
Check the following:

- The lowest part of the horizontal bright/dark limit must touch the dash -1- on the test surface when the low beams are on.
- Break-away point -2- between left horizontal part and rising part on right of light-dark border must run vertically through central point.



#### Note

*To make it easier to find break-away point -2- cover and uncover left half of headlamp (as viewed when looking forward) a few times. Then check low beam again.*







## 2.47.3 HID Headlamps, Aiming

### Performing the Basic Setting:

- Connect the Vehicle Diagnostic Tester . Refer to  
⇒ [“1.6 Vehicle Diagnostic Tester, Connecting”, page 15](#) .
- Switch on the ignition.
- Select “Guided Functions”.
- Select the VIN.
- Select vehicle system “automatic head lamp range control/  
cornering lamp”.
- Select “perform basic setting” and confirm.
- Follow the instructions on the Vehicle Diagnostic Tester .
- Headlamps, Checking and Adjusting

### Adjust the right headlamp:



#### WARNING

*If the vehicle is a hybrid, then inspect all hybrid specific components. Refer to  
⇒ [“2.21 Hybrid Components, Checking for Damage to High Voltage Components and Cables”, page 90](#) .*

*Contact to the responsible high voltage technician is something needs clarification.*



Adjustment screws for left headlamp are arranged symmetrically.

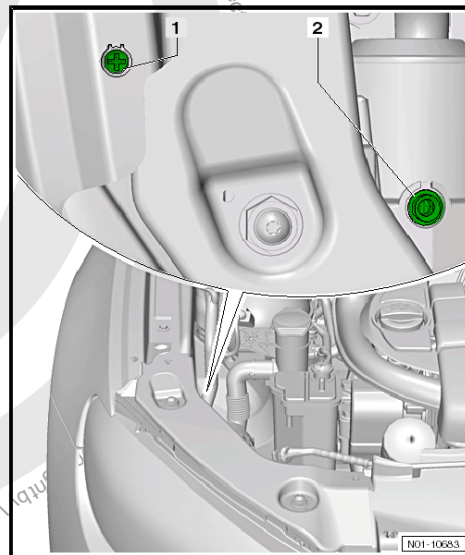
- ♦ Adjustment screw (inner hexagon) for side adjustment of low beam bright/dark boundary -1- (sealed on USA and Canada vehicles)
- ♦ Adjustment screw (inner hexagon) for height adjustment of low beam bright/dark boundary -2-.
- Turn the adjustment screw for height adjustment -2- until the correct setting is achieved.



#### Note

*In some markets the adjusting screw for the side adjustment -1- is sealed. Lateral adjustment is not permitted.*

- Turn the adjustment screw for lateral adjustment -1- until the correct setting is achieved.
- Then the side adjustment must be checked and correct with adjustment screw -1- if necessary.



#### Note

- ♦ *Adjusting the left headlamp is identical and in the same sequence.*
- ♦ *Adjustment screws for left headlamp are arranged symmetrically.*

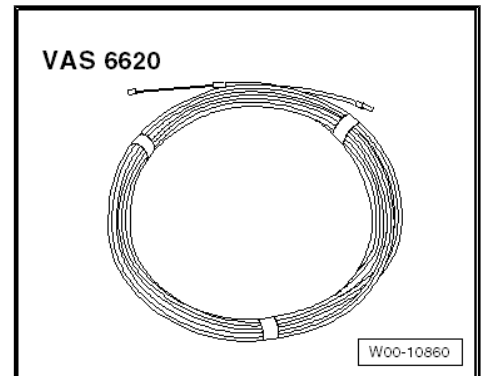




## 2.48 Sunroof Water Drains, Check for Clearance and Clean if Necessary

Special tools and workshop equipment required

- ◆ Rail Cleaner - VAS 6620-



Perform the following:

- Open the sunroof.
- Make sure the sunroof drain holes -arrows- are not blocked with dirt. Clean them if necessary.
- Using tap water, pour water through the sunroof drains making sure the same amount of water is coming out of the wheel housing.

If this is happening, then the check is completed. Perform the following only if just a little or no water leaks out of the wheel housings:

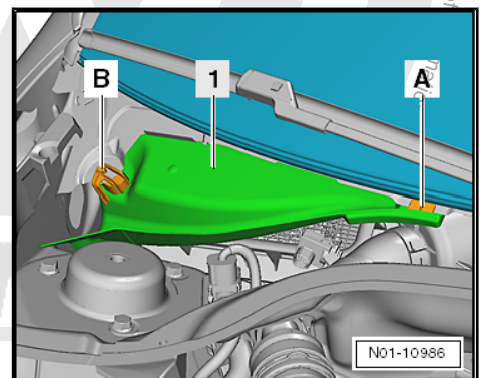
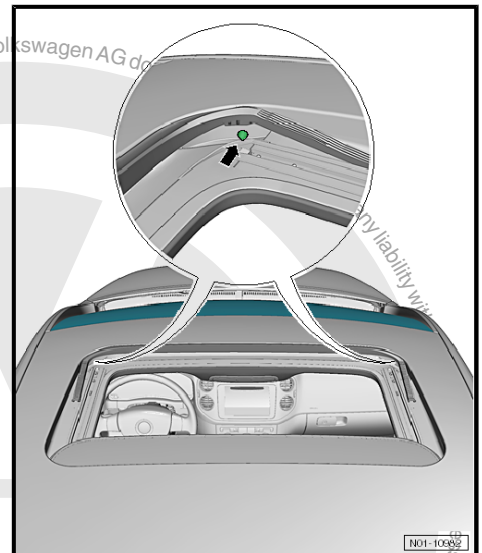
- Remove the plenum chamber cover. Refer to ➔ Body Exterior; Rep. Gr. 50 ; Removal and Installation .



### Note

*Removing and installing the plenum chamber is a separate charge.*

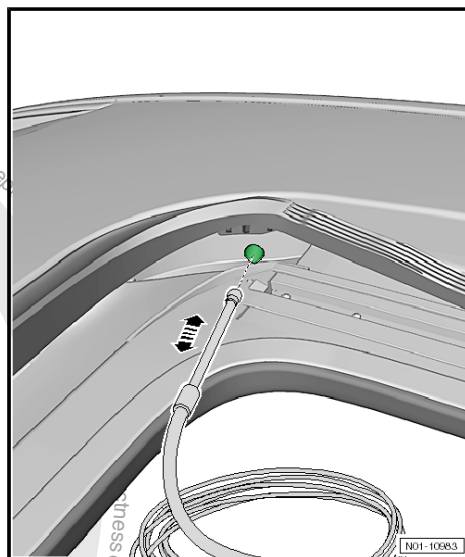
- Open the latches -A and B- and remove the cover -1-.



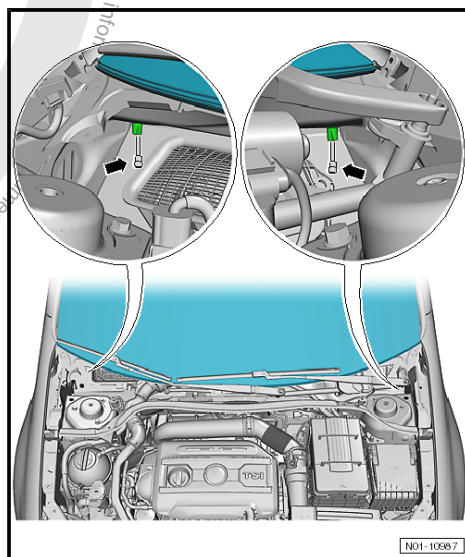




- Move the Rail Cleaner - VAS 6620- back and forth up to the drain valves and push out any dirt.

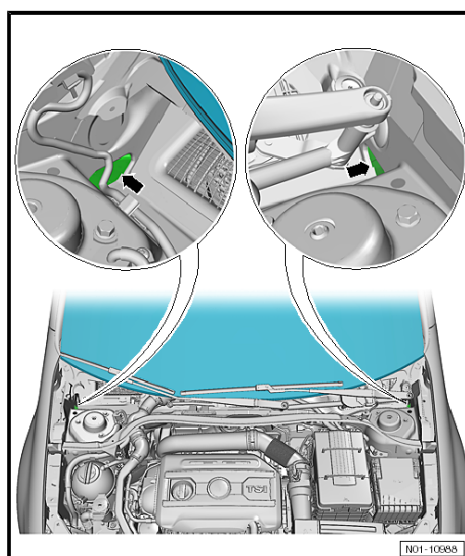


- The drains -arrows- are located on the left and right sides of the plenum chamber.



- Make sure the plenum chamber drains -arrows- are not blocked with dirt. Clean them if necessary.
- Using tap water, pour water through the sunroof drain holes one more time.

Install in reverse order of removal.







## 2.49 Service Interval Display, Resetting and Coding

⇒ "2.49.1 Service Interval Display, Resetting with Vehicle Diagnostic Tester", page 177

⇒ "2.49.2 Service Interval Display, Resetting, without Vehicle Diagnostic Tester through MY 2013", page 178

⇒ "2.49.3 Service Interval Display, Resetting, without Vehicle Diagnostic Tester from MY 2014", page 178

⇒ "2.49.4 Service Interval Display, Recoding", page 180

⇒ "2.49.5 Service Interval Display: Coding at delivery inspection (for USA and Canada)", page 182

⇒ "2.49.6 Service Interval Display, Coding at the First Oil Change (for USA and Canada)", page 184

### 2.49.1 Service Interval Display, Resetting with Vehicle Diagnostic Tester

- Connect the Vehicle Diagnostic Tester . Refer to  
⇒ "1.6 Vehicle Diagnostic Tester, Connecting", page 15 .
- Switch on the ignition.
- Select Guided Functions.

If the displays indicated in the procedure are not shown on the display: Refer to Operating Instructions for Vehicle Diagnostic Tester .

- Select the following one after the other:
  - ◆ Brand
  - ◆ Type
  - ◆ Model year
  - ◆ Engine code
- Confirm the VIN.
- Select the following one after the other:

#### Vehicles through MY 2013

- ◆ "Instrument Cluster"
- ◆ "Service Interval Display, Resetting"

#### Vehicles from MY 2014

- ◆ "Instrument Cluster"
- ◆ Select the service that is to be reset.

#### All Vehicles

- Adapting according to "Guided Functions".

#### End Adaptation

- Select Go to and then press End.
- Turn off the ignition and disconnect the diagnostic connector.
- Switch on the ignition.

After switching on the ignition, service event is no longer indicated in the odometer display in the instrument panel insert.

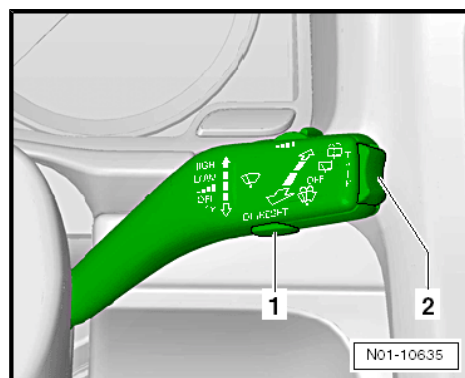




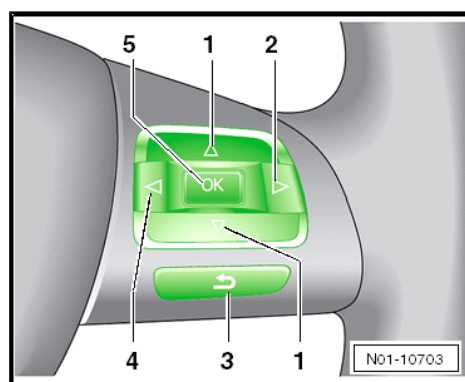
## 2.49.2 Service Interval Display, Resetting, without Vehicle Diagnostic Tester through MY 2013

Using the Rocker Switch on the Windshield Wiper Lever or the Button in the Multifunction Steering Wheel

- Using the rocker switch, select the “settings” menu, or



- Using the button on the multifunction steering wheel, select the “settings” menu.
- Once in the “Service” submenu, select “Reset” and then press the “OK” button -1- either in the windshield wiper lever or in the multifunction steering wheel -5- to reset the service interval display.
- Press the “OK” button to confirm the security question that follows.

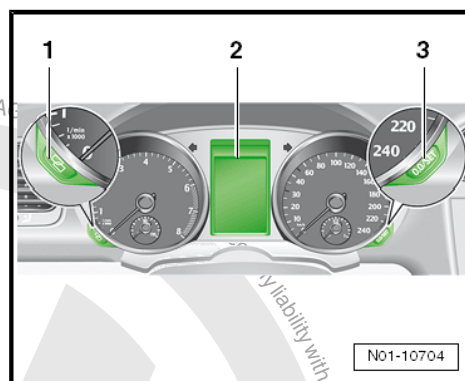


### Using the Buttons in the Instrument Cluster

- With the ignition turned off, hold the -3- button pressed.
- Switch on the ignition.
- Release the button -3- press the button for setting the clock -1- one time quickly.

The Service Interval Display is now in the Reset mode.

After a brief period, the display switches back to the normal display.



## 2.49.3 Service Interval Display, Resetting, without Vehicle Diagnostic Tester from MY 2014

### Resetting the Oil Change Service

Using the buttons in the instrument cluster.

- ♦ If the vehicle does not have an instrument cluster text display.





- With the ignition turned off, press the -3- button and hold it pressed.
- Switch on the ignition.
- Release the button -3- and press the button -1- within 20 seconds.

The Service Interval Display is now in the Reset mode.

After a brief period, the display switches back to the normal display.

- ◆ If the vehicle does have an instrument cluster text display.

- With the ignition turned off, press the -3- button and hold it pressed.
- Switch on the ignition.
- Release the button -3-.

The confirmation request appears in the instrument cluster display.

- By pressing the button -1- in the windshield wiper lever

- or in the multifunction steering wheel by pressing the button -5- to confirm.

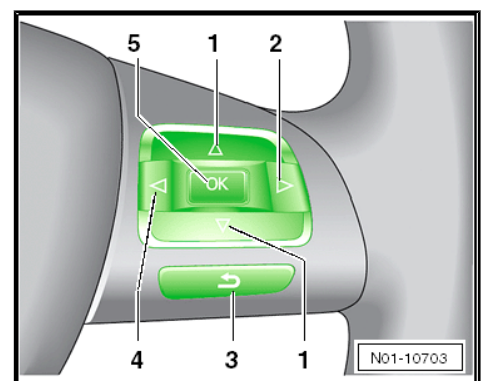
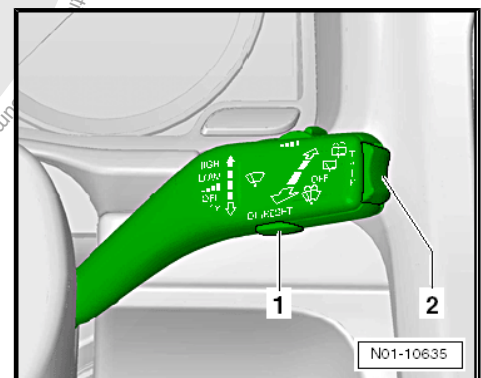
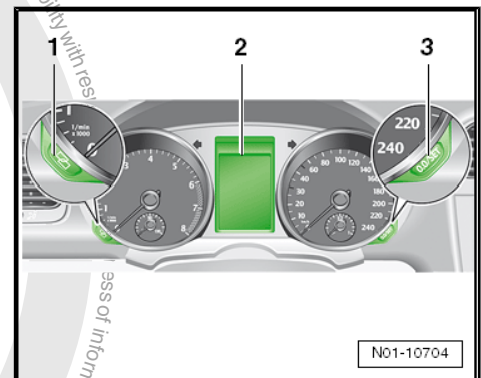
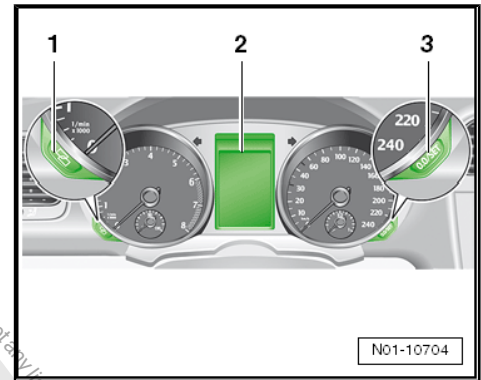
The Service Interval Display is now in the Reset mode.

After a brief period, the display switches back to the normal display.

### Resetting the Inspection Service

Using the buttons in the instrument cluster.

- ◆ If the vehicle does not have an instrument cluster text display.
- Turn off ignition.
- Emergency flasher switched on.







- Press and hold the button -3-.
- Switch on the ignition.
- Release the button -3- and press the button -1- within 20 seconds.
- Turn off the emergency flasher.

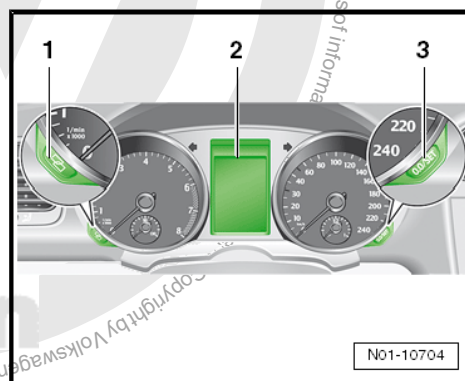
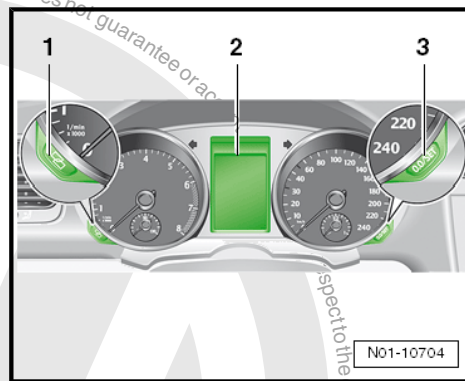
The Service Interval Display is now in the Reset mode.

After a brief period, the display switches back to the normal display.

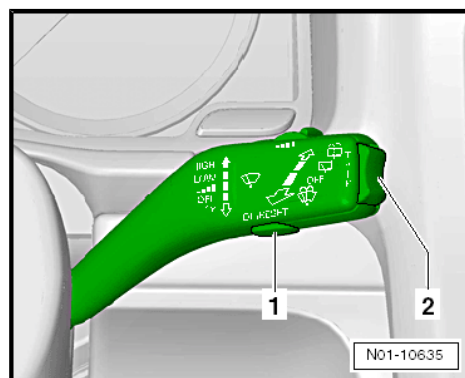
- ◆ If the vehicle does have an instrument cluster text display.

- Turn off ignition.
- Emergency flasher switched on.
- Press and hold the button -3-.
- Switch on the ignition.
- Release the button -3-.

The confirmation request appears in the instrument cluster display.



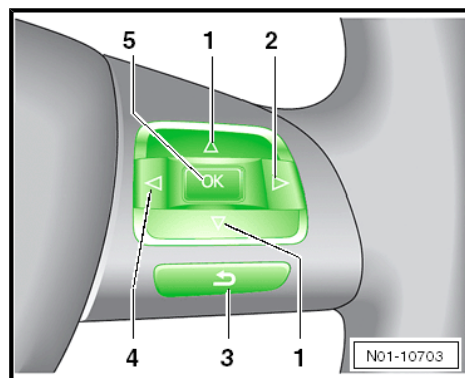
- By pressing the button -1- in the windshield wiper lever



- or in the multifunction steering wheel by pressing the button -5- to confirm.
- Turn off the emergency flasher.

The Service Interval Display is now in the Reset mode.

After a brief period, the display switches back to the normal display.



## 2.49.4 Service Interval Display, Recoding

- Connect the Vehicle Diagnostic Tester . Refer to  
⇒ ["1.6 Vehicle Diagnostic Tester, Connecting", page 15](#) .
- Switch on the ignition.





- Touch: “Guided Functions” on the touch screen.



#### Note

*If the displays indicated in the procedure are not shown on the display. Refer to Operating Instructions for Vehicle Diagnostic Tester*

- Select the following one after the other:
  - ◆ Brand
  - ◆ Type
  - ◆ Model year
  - ◆ Engine code
- Confirm the VIN.
- Select the following one after the other:
  - ◆ “Instrument Cluster”
  - ◆ “Adapt service interval extension.”
- Adapting according to “Guided Functions”.

#### End Adaptation

- Select **Go to** and then press **End**.
- Turn off the ignition and disconnect the diagnostic connector.

#### Change in the Km-Maximum Values for Oil Change Service (fixed) during the Delivery Inspection.

- Connect the Vehicle Diagnostic Tester . Refer to [⇒ “1.6 Vehicle Diagnostic Tester, Connecting”, page 15](#) .
- Switch on the ignition.
- Touch: “Guided Functions” on the touch screen.



#### Note

*If the displays indicated in the procedure are not shown on the display. Refer to Operating Instructions for Vehicle Diagnostic Tester*

- Select the following one after the other:
  - ◆ Brand
  - ◆ Type
  - ◆ Model year
  - ◆ Engine code
- Confirm the VIN.
- Select the following one after the other:
  - ◆ “Instrument Cluster”
  - ◆ “Identify control module”
  - ◆ “Guided functions”
  - ◆ “Oil change service (fixed)”
- Follow the “Guided Functions” instructions.





- “1” Reset Oil change service (fixed).
- Follow the “Guided Functions” instructions.

The maximum Km values are displayed in the Vehicle Diagnostic Tester.

- Select “no”.
- Select the country specific maximum values until the next oil change service.
- Adapting according to “Guided Functions”.

#### End Adaptation

- Select **Go to** and then press **End**.
- Turn off the ignition and disconnect the diagnostic connector.

### 2.49.5 Service Interval Display: Coding at delivery inspection (for USA and Canada)

- Connect the Vehicle Diagnostic Tester . Refer to [⇒ “1.6 Vehicle Diagnostic Tester, Connecting”, page 15](#) .
- Switch on the ignition.
- Touch the “GUIDED FAULT FINDING” button/field on the screen.



#### Note

*If the displays indicated in the procedure are not shown on the display, refer operating instructions for Vehicle Diagnostic Tester or Vehicle Diagnostic Tester .*

- Select the following one after the other:

- ◆ Brand
- ◆ Type
- ◆ Model year
- ◆ Engine code
- Confirm the VIN.

If the vehicle identification procedure was performed correctly, press **>** button for confirmation.

- Select the following one after the other:





- ◆ Body
- ◆ Electrical Equipment
- ◆ 01 - On Board Diagnostic (OBD) capable systems
- ◆ “Instrument cluster” -ARROW-.
- ◆ Instrument cluster functions
- ◆ “Adapt Service Interval Display”.



#### Note

- ◆ Check which intervals are set.
- ◆ Intervals must be set or recoded for first oil change service at 5,000 miles/8,000 km.
- Perform Adaptation according to instructions from “GUIDED FAULT FINDING”.

#### Note for vehicles from MY 07:



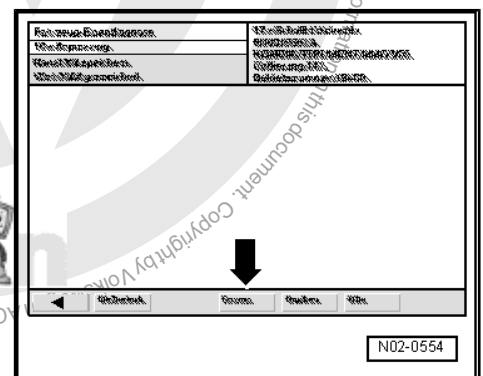
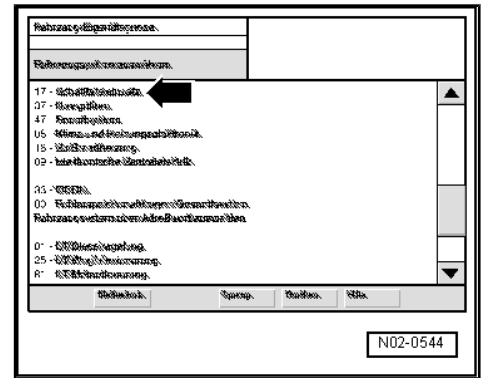
#### Note

- ◆ The following applies to USA and Canada vehicles:
- ◆ Channel 50: 50 (= 5,000 miles ) for USA
- ◆ Channel 50: 80 (= 8000 km ) for CDN
- ◆ Channel 51: 372 (= 372 days ) for USA and CDN
- ◆ When coding to QG0 or QG2: Channels 42 + 49 are not available and are replaced with channels 50 + 51.
- ◆ Furthermore, when coding QG0, QG2, channels 43, 44 and 49 are deactivated

#### Ending the adaptation:

Indicated on display:

- Press the **Go to** button -arrow- on display.

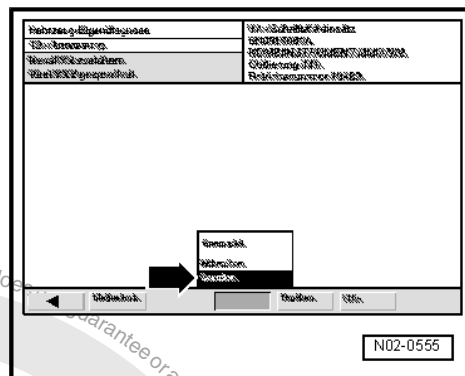






Indicated on display:

- Press the **End** button -arrow- on the display.
- Turn off the ignition and disconnect the diagnostic connector.



## 2.49.6 Service Interval Display, Coding at the First Oil Change (for USA and Canada)

- Connect the Vehicle Diagnostic Tester . Refer to [⇒ "1.6 Vehicle Diagnostic Tester, Connecting", page 15](#) .
- Switch on the ignition.
- Press: "OBD" on the touch screen.



### Note

*If the displays indicated in the procedure are not shown on the display. Refer to Operating instructions for Vehicle Diagnostic Tester or Vehicle Diagnostic Tester .*

- Select the following one after the other:
  - ◆ Brand
  - ◆ Type
  - ◆ Model year
  - ◆ Engine code
- Confirm the VIN.

If the vehicle identification procedure was performed correctly, press **>** button for confirmation.

- Select the following one after the other:





- ◆ 17 "Instrument Cluster" -ARROW-.
- ◆ 10 "Adaptation"
- Select channel 49.
- Enter 372.
- Select channel 42.
- Perform adaptation according to instructions of "ON BOARD DIAGNOSTICS (OBD)".



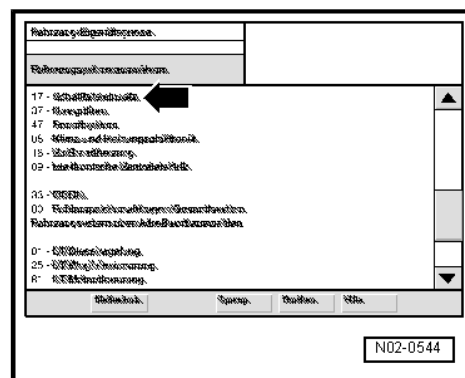
#### Note

- ◆ The following applies to USA and Canada vehicles:
- ◆ Channel 42: 100 (= 10,000 miles ) for USA
- ◆ Channel 42: 160 (= 16,000 km ) for CDN
- ◆ Channel 49: 372 (= 372 days ) for USA and CDN

#### Ending the Adaptation:

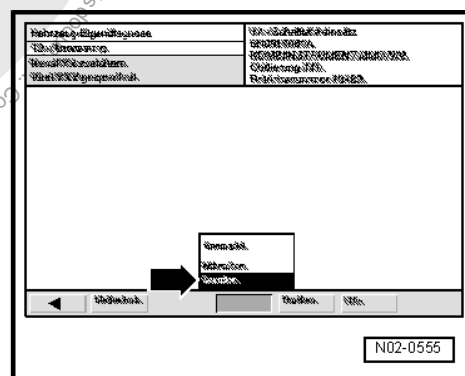
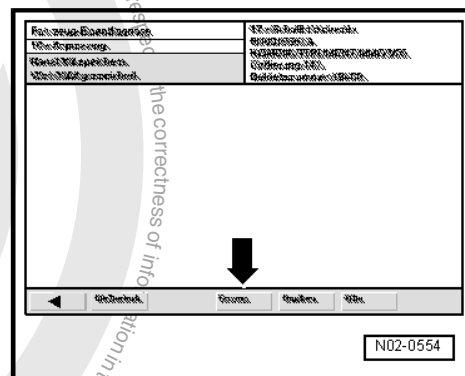
Indicated on display:

- Press the **Go to** button -arrow- on display.



Indicated on display:

- Press the **End** button -arrow- on the display.
- Turn off the ignition and disconnect the diagnostic connector.



## 2.50 Sunroof, Checking Functionality, Cleaning and Lubricating Guide Rails

### Special Tools and Equipment

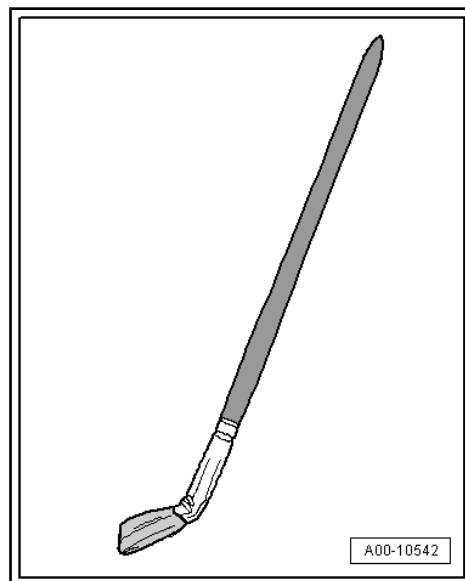
#### Special tools and workshop equipment required

- ◆ Lint-free cloths.
- ◆ Brush
- ◆ Shop vacuum, such as Wet And Dry Vacuum Cleaner
- ◆ Lubricant - G 060 751 A2- for guide rails.
- ◆ Krytox paste - G 052 141 A2- for seals.





- ◆ Isopropyl alcohol for cleaning the seals.



#### Note

*Paint brush (approximately 15 mm wide) (bend approximately 40°).*



#### Caution

*Hold a cloth under the respective places to protect the vehicle interior from getting dirty.*

#### Clean and Coat the Glass Cover Seal

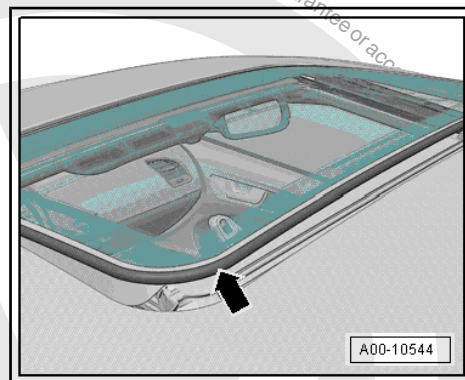
- Install the glass sunroof panel.



#### Note

*Lubricate the front part first with the glass panel open and the tilt the glass panel in the rear.*

- Remove grease and remaining dirt from the glass sunroof panel -arrow- with isopropyl alcohol and a lint-free cloth.
- Apply a thin layer of Krytox Paste G 052 141 A2- as far as possible on the glass sunroof panel -arrow- with a commercially available paint brush.
- After applying, make sure that there is no visible white grease film remaining.
- Wipe away any excess Krytox paste from the seal with a lint-free cloth.

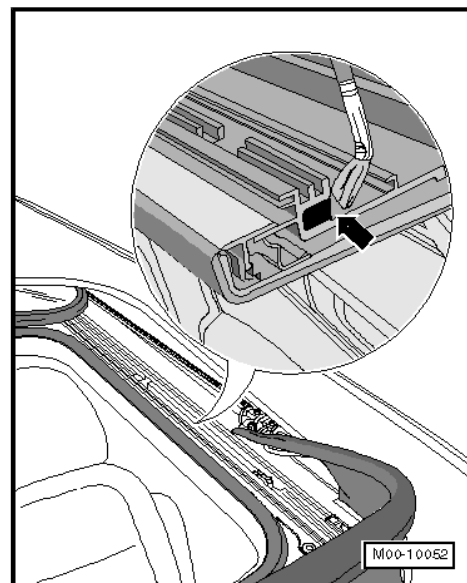




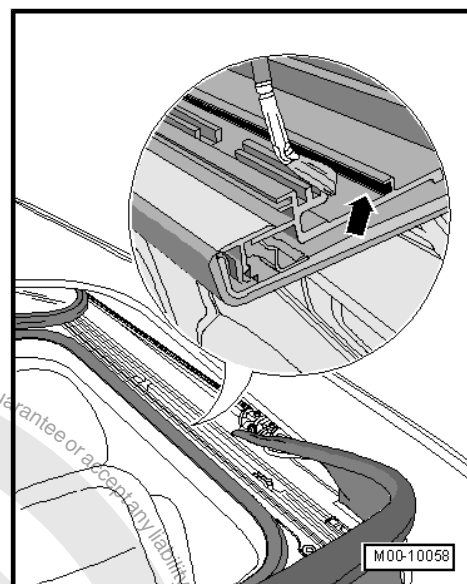


### Clean and coat the guide rail

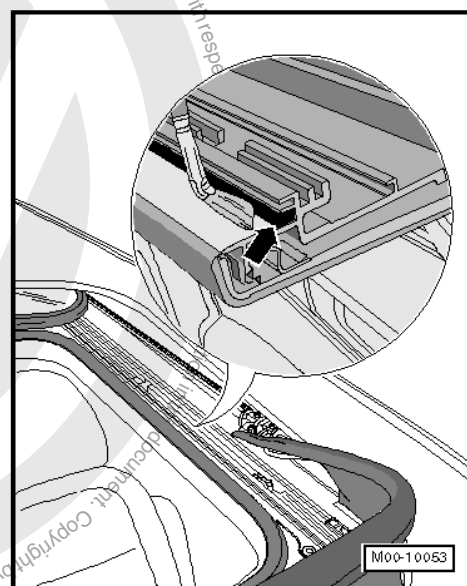
- Open the glass sunroof panel entirely.
- Remove the grease and remaining dirt on the guide rail with a lint-free cloth. (If necessary, remove sand and fine pollen from the guide rails with a shop vacuum).
- Apply Lubricant - G 060 751 A2- on the inside of the guide rail -arrow- with a commercially available paint brush.



- Apply Lubricant - G 060 751 A2- on the outside of the guide rail -arrow- with a commercially available paint brush.



- Apply Lubricant - G 060 751 A2- on the side of the guide rails for the sliding headliner -arrow- with a commercially available paint brush.
- Remove the excess lubricant from the guide rails with a lint-free cloth.
- Repeat the process for the opening on the opposite side of the vehicle.



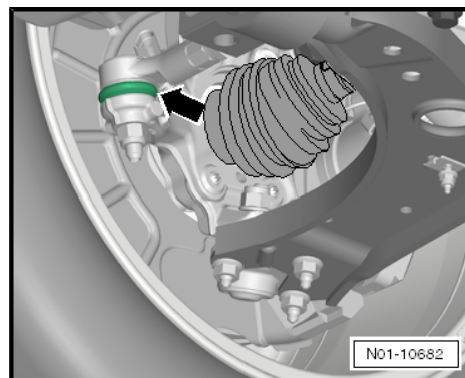




## 2.51 Tie Rod Ends, Checking Play, Security and Joint Boots

Perform the following:

- With vehicle raised (wheels off ground) check tie rods by moving tie rods and wheels. Play: no play
- Check attachments
- Check track rod joint boots -arrow- for damage and proper seating.



## 2.52 Parking Heater: Setting Week Day in Instrument Cluster Menu

⇒ [“2.52.1 Parking Heater, Setting Week Day in Instrument Cluster Menu, Jetta from MY 2005 and Golf Wagon from MY 2007”, page 188](#)

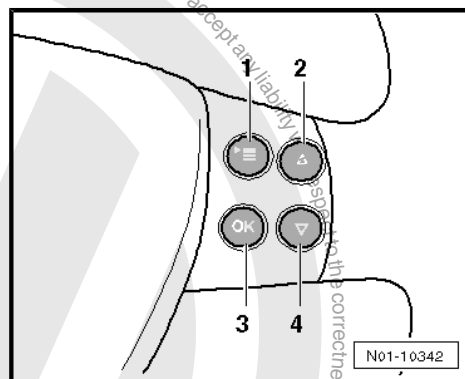
⇒ [“2.52.2 Parking Heater, Golf Wagon from MY 2010 and Jetta from MY 2011, Setting Week Day in Instrument Cluster Menu”, page 189](#)

### 2.52.1 Parking Heater, Setting Week Day in Instrument Cluster Menu, Jetta from MY 2005 and Golf Wagon from MY 2007

Because the weekday in the auxiliary heater menu has nothing to do with setting the time and date in the instrument cluster, it must set separately.

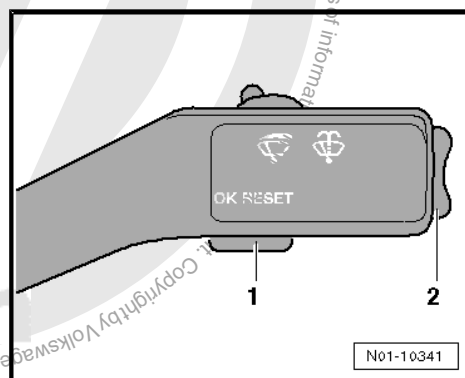
#### Weekday, Setting with Buttons in Multi-Function Steering Wheel:

- Press button -1- until auxiliary heater menu appears.
- Press the button -4- until the “day of the week” is displayed and then press the button -3- to select it.
- Now set weekday with -4- and -2- buttons and confirm with -3- button.
- Exit the menu with the button -1-.



#### Selecting the day of the Week using the Buttons on Windshield Wiper Lever:

- the path in the menu is the same as setting with the buttons in the multifunction steering wheel.







## 2.52.2 Parking Heater, Golf Wagon from MY 2010 and Jetta from MY 2011, Setting Week Day in Instrument Cluster Menu

Because the weekday in the auxiliary heater menu has nothing to do with setting the time and date in the instrument cluster, it must set separately.

### Weekday, Setting with Buttons in Multi-Function Steering Wheel:

Use the button -5- to confirm the menu points.

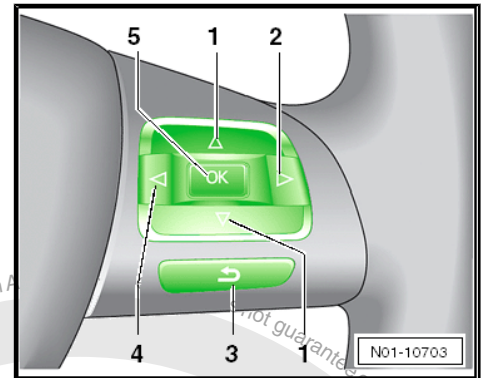
Use the arrow buttons -1- -2- and -4- to switch from one menu to another.

#### 1. Selecting the main menu:

- Switch on the ignition. An outline of a vehicle appears.
- Press the “OK” button -5- in the multifunction steering wheel.
- Press the arrow buttons -2- and -4- on the multifunction steering wheel until the “auxiliary heater” menu appears.
- Press the “OK” button -5- in the multifunction steering wheel.

#### 2. Selecting the day of the week:

- Press the arrow buttons -1- until the “setting start time” menu appears.
- Select the “day of the week”.



### Setting the Weekday using the Buttons on the Windshield Wiper Lever:

Use the button -1- to confirm the menu points.

Use the rocker switch -2- to switch from one menu to another.

#### 1. Selecting the main menu:

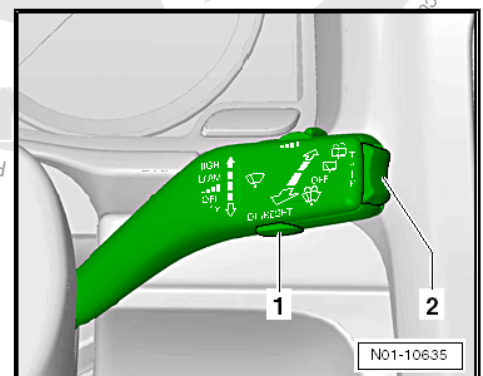
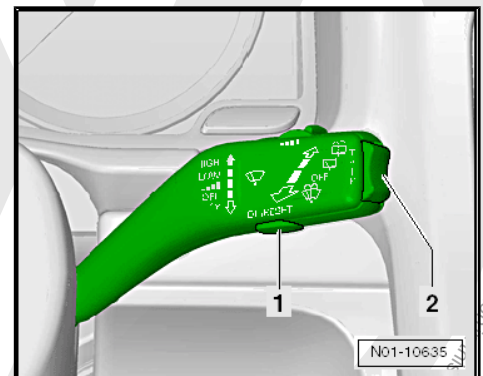
- Switch on the ignition. An outline of a vehicle appears.
- Press the button -1- one time.
- Hold the rocker switch -B- pressed down for approximately one second to switch from one menu back into the main menu. Or select “back” in the menu and press the button -1-.
- Press the top or the bottom of the rocker switch -2- to highlight a point on the menu.

The marked menu item will be between the two horizontal lines. There is also a small triangle on the right side.

- Highlight “auxiliary heater” and press the button -1- on the windshield wiper lever to confirm.

#### 2. Selecting the day of the week:

- Press the rocker switch -2- up or down to highlight “set start time”.
- Select the “day of the week” and then press the button -1- to confirm.







## 2.53 Dust and Pollen Filter, Cleaning Housing and Removing and Installing Filter

### Procedure

Refer to ⇒ Heating, Ventilation and Air Conditioning; Rep. Gr. 80 ; Removal and Installation

## 2.54 Transportation Mode, Switching Off



### Note

- ◆ *The transportation mode assures that the vehicle will start.*
- ◆ *The transportation mode reduces the drain on the battery by switching off any electrical consumers.*
- ◆ *All vehicle functions that are not necessary while the vehicle is being transported and do not require any power from the battery, are switched off to conserve the battery charge.*
- ◆ *This applies especially to those features, which could be left on and will drain the battery capacity.*
- ◆ *Examples of these would be the radio, or vent flaps which are electronically actuated or the anti-theft alarm system which could be set off during transportation.*

### Procedure:



### Note

*If the displays indicated in the procedure are not shown on the display. Refer to operating Instructions for Vehicle Diagnostic Tester*

VAS PC	
–	Connect the Vehicle Diagnostic Tester . Refer to ⇒ <b>“1.6 Vehicle Diagnostic Tester, Connecting”, page 15</b> .
–	Switch on the ignition.
–	Select “Guided Fault Finding” on the touch screen.
–	Select the VIN.
–	Select
–	Select the field “Go to” on the screen.
–	Select “Function/component selection”.
–	Select “Body”.
–	Select “Electrical Equipment”.
–	Select “Systems capable of On Board Diagnostic (OBD)”.
–	Select “Data bus diagnostic interface”.
–	Select “Data bus diagnostic interface, functions”.
–	Select “switch on/switch off transportation mode”.
–	Follow the “Guided Fault Finding” instructions.

### Procedure for fault stored in the DTC memory “Transport Mode Active P169A00”

- Turn on the transportation mode again.

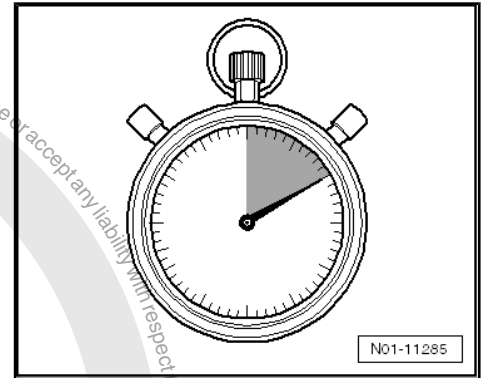




- Turn off the ignition for ten seconds.
- Turn off the transportation mode again.
- Turn off the ignition again for ten seconds.

The fault stored in the DTC memory "Transportation mode active P169A00" is no longer equipped after performing this procedure.

Keep the Vehicle Diagnostic Tester connected because it may be needed later to perform other checks or tests.



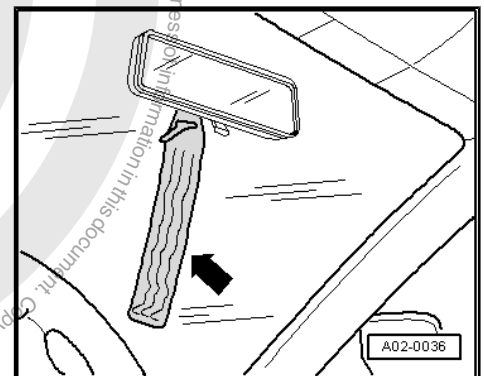
## 2.55 Transport Protection, Remove the Locking Pieces from the Front Axle Struts

In vehicles with sport suspension, locking pieces are installed in springs of front axle. These models can be identified by a tag attached at the mirror -arrow-.



### Note

*Locking pieces should prevent vehicle from bouncing when being driven on to an automobile transport or railroad car and thereby become damaged.*



### WARNING

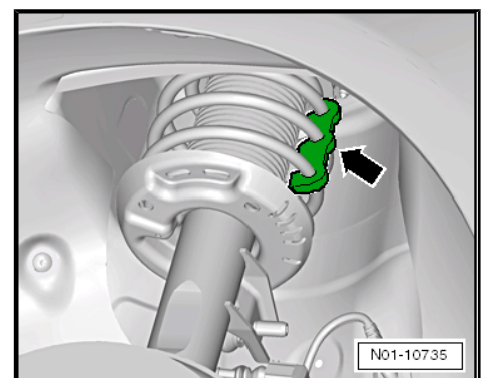
***Locking pieces must always be removed before delivering the vehicle! There is a "Warning!" hang tag hanging from the rear-view mirror as a reminder.***

Perform the following:



### Note

- ◆ *It is not necessary to remove the wheels.*
- ◆ *Be careful not to damage surface of coil springs.*
- Relieve load on coil spring by raising vehicle on lifting platform.
- Press locking piece -arrow- from coil spring.





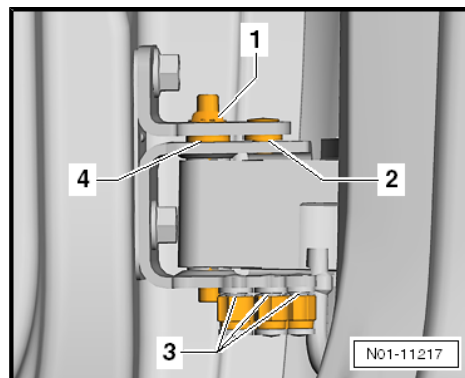


## 2.56 Door Arrester, Lubricating

Perform the following procedure:

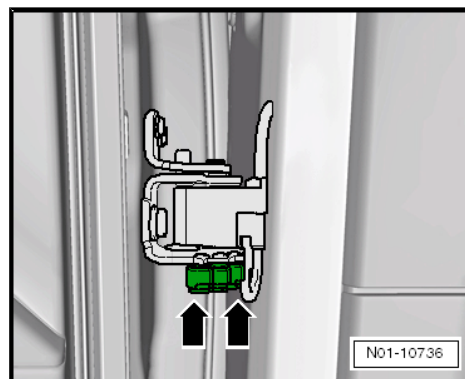
- Lubricate the door arrester with Universal Oil Spray - G 000 115 A2- at locations -1-, -2-, -3- and -4-.

Move the door back and forth several times so that the universal oil coats the entire door arrester.

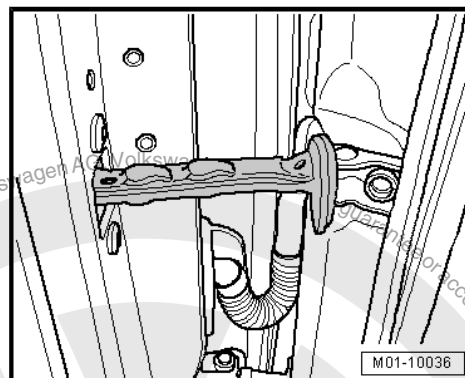


- Wipe off any excess oil with a cloth.
- Coat the door arrester with Paste - G 000 150- where indicated with the -arrow-.

**Simple door arrester.**



- Remove the grease and remaining dirt on the door arrester with a lint-free cloth.
- Apply Paste - G 060 751 A2- in the upper part of the door arrester.







## 2.57 Clock and Date, Setting

⇒ [“2.57.1 Clock and Date, Jetta from MY 2005 and Golf Wagon from MY 2007, Setting”, page 193](#)

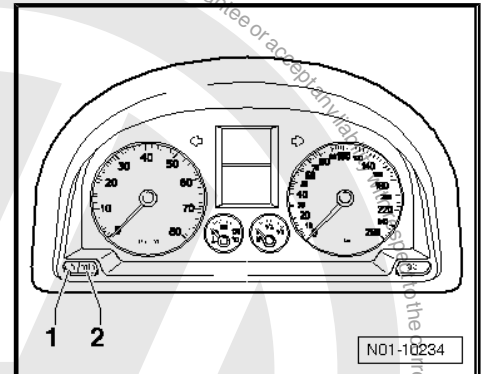
⇒ [“2.57.2 Clock and Date, Setting, Golf Wagon from MY 2010 and Jetta from MY 2011”, page 194](#)

### 2.57.1 Clock and Date, Jetta from MY 2005 and Golf Wagon from MY 2007, Setting

#### Set Clock with Buttons below Tachometer:

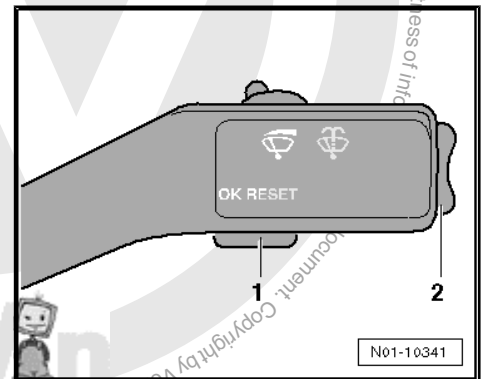
Adjustment buttons are located at left under tachometer.

- Press the left button -1- to set the hour. Press the button quickly to advance the hours.
- Press the right button -2- to set the minute. Press the button quickly to advance the minutes.



#### Set Hour and Date with Buttons on Windshield Wiper Lever:

- Switch on the ignition.
- Press button -2- for 2 seconds to go to main menu.
- Select “Settings” menu with button -2- and confirm with button -1-.
- Select “Clock” menu with button -2- and confirm with button -1-.
- Press the button -1- to highlight “hours”. Press the button -2- to select the correct hour and press button -1- to confirm.
- Do the same with menu item “Minutes”.
- You can leave the “Settings” menu using menu item “back”.
- Select “MFI” (multifunction indicator) and press the button -1- to confirm.
- Turn off ignition.

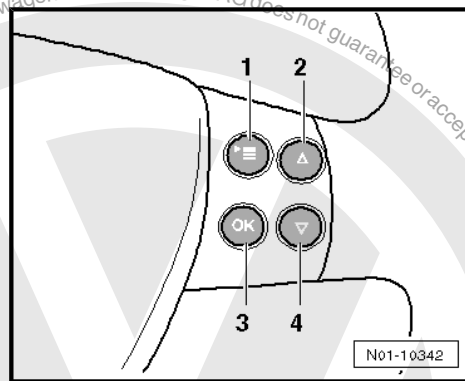






### Set Hour and Date with Buttons on Multi-Function Steering Wheel:

- Switch on the ignition.
- Press the button -1- until the “settings” menu appears.
- Then select menu item “Clock” with buttons -2- and -4-.
- Press the button -3- to confirm.
- The highlighted menu item will appear between the two horizontal lines when “hours” is highlighted. Press the button -3- to confirm and then set the hour using the buttons -2- and -4-.
- Confirm with button -3- and change to minute setting which is done the same as when setting the hour.
- You can leave the menu again with button -1-.
- Turn off ignition.



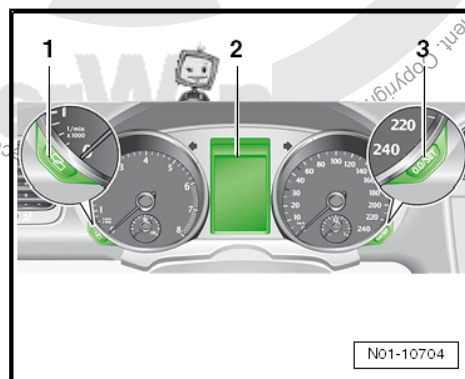
## 2.57.2 Clock and Date, Setting, Golf Wagon from MY 2010 and Jetta from MY 2011

### Clock with Buttons Inside the Instrument Cluster

The clock can be set, only when the clock time is being displayed in the instrument cluster.

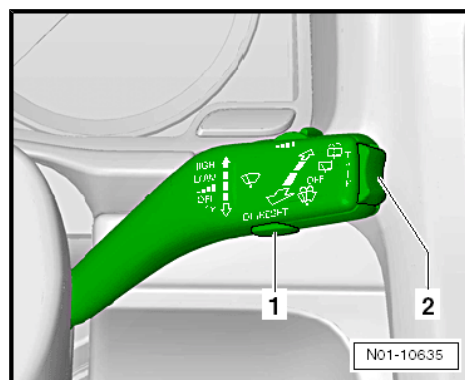
Use the buttons -1- and -2- inside the instrument cluster to set the clock.

- Press the button -1- to select the hour setting.
- Press the button -3- quickly to advance the hours. Hold button down to quickly scroll through hours.
- Press the button -1- again to select the minutes display.
- Press the button -3- quickly to advance the minutes.
- Hold button down to quickly scroll through minutes.
- Press the button -1- again to end the process.



### Set Hour and Date with Buttons on Windshield Wiper Lever:

- Switch on the ignition.
- Press button -2- for 2 seconds to go to main menu.
- Use the button -2- to select the “settings” menu. Confirm with button -1-.
- Select “Clock” menu with button -2- and confirm with button -1-.
- Now mark menu time “Hours” by pressing button -1-, set correct hour with button -2- and then confirm with button -1-.
- Do the same with menu item “Minutes”.
- You can leave the “Settings” menu using menu item “back”.
- Select “MFI” (multifunction indicator) and press the button -1- to confirm.
- Turn off ignition.

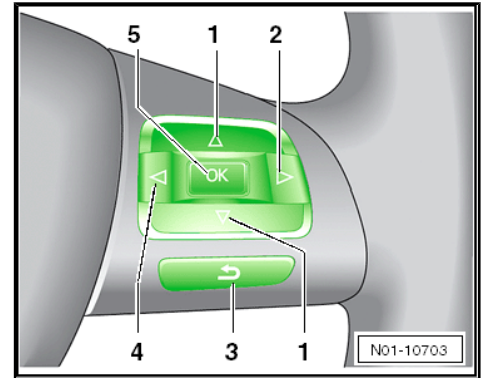






### Set Hour and Date with Buttons on Multi-Function Steering Wheel:

- Switch on the ignition.
- Press the button -5- until the "settings" menu appears.
- Then select menu item "Clock" with buttons -2- and -4-.
- Confirm with button -5-.
- Confirm the "hour" with the button -5- and use the buttons -2- and -4- to set the correct hour.
- Confirm with button -5- and change to minute setting which is done the same as when setting the hour.
- You can leave the menu again with button -1-.
- Turn off ignition.



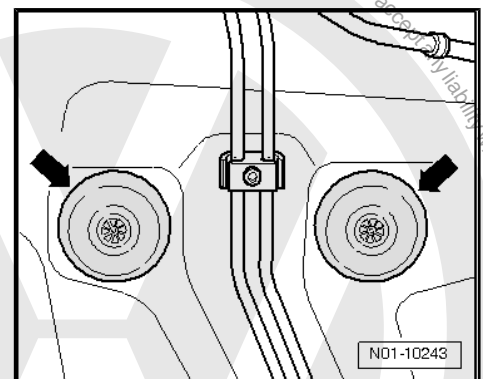
## 2.58 Underbody, Underbody Components, Checking for damage



### Caution

- *When checking the underbody protection also check wheel wells and sill panels!*
- ◆ *Make sure all the lines are secure in their mountings, all plugs are present and there is no damage to the underbody.*
- ◆ *Correct any malfunctions (repair procedure). This can help prevent corrosion and rust-through.*

Pay special attention to any cracks, detachments and corrosion of the underbody protection when inspecting the caps -arrows-.



## 2.59 Toothed Belt and Tensioner, Replacing (TDI engines)



### Note

*Generally, it is not necessary to replace the belt before reaching the next replacement interval. In particular, cracks on the back side of the belt do not affect service life and cannot be claimed as goodwill or warranty measures.*

- Refer to ➤ Engine Mechanical, Fuel Injection and Glow Plug, Rep. Gr. 15 ; Removal and Installation .



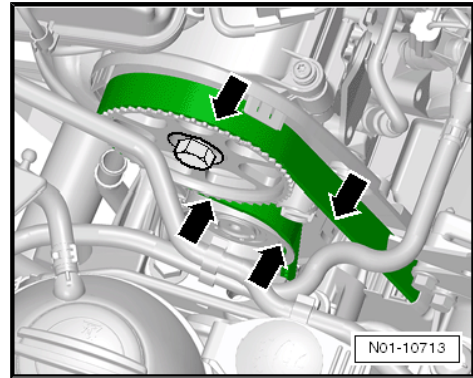




## 2.60 Camshaft Drive Toothed Belt, Checking, TDI

### Toothed Belt Condition, Checking

- Remove the upper toothed belt guard. Refer to ⇒ Engine Mechanical, Fuel Injection and Glow Plug; Rep. Gr. 15 ; Removal and Installation .
- Turn the crankshaft completely at least one time and check the condition of the toothed belt at the following points:
  - ◆ Cranks, cross-sectional breaks, tears (on side of cover) -arrow-
  - ◆ Lateral movement
  - ◆ Fraying of cords
  - ◆ Tears (in tooth base) -arrow-
  - ◆ Separation (cover layer, belt cords)
  - ◆ Surface cracks (plastic shroud)
  - ◆ Oil or grease contamination



#### Note

*It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the belt is a repair procedure.*

## 2.61 Camshaft Drive Toothed Belt, Replacing (2.0L FSI and TFSI)



#### Note

*Generally, it is not necessary to replace the belt before reaching the next replacement interval. In particular, cracks on the back side of the belt do not affect service life and cannot be claimed as goodwill or warranty measures.*

Tooth belt, removing and installing, refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 15 ; Removal and Installation .

## 2.62 Camshaft Drive Toothed Belt, 4-Cylinder Gasoline Engines without Change Interval, Checking

⇒ ["2.62.1 Toothed Belt Condition, Checking", page 196](#)

⇒ ["2.62.2 Toothed Belt Condition, Checking, 1.4L TSI Hybrid Engine", page 197](#)

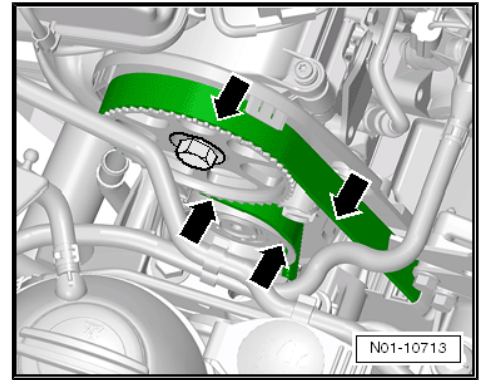
### 2.62.1 Toothed Belt Condition, Checking

- Remove the upper toothed belt guard. Refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 15 ; Removal and Installation .





- Turn the crankshaft completely at least one time and check the condition of the toothed belt at the following points:
- ◆ Cracks, cross-sectional breaks, tears (on side of cover) -arrow-
- ◆ Lateral movement
- ◆ Fraying of cords
- ◆ Tears (in tooth base) -arrow-
- ◆ Separation (cover layer, belt cords)
- ◆ Surface cracks (plastic shroud)
- ◆ Oil or grease contamination



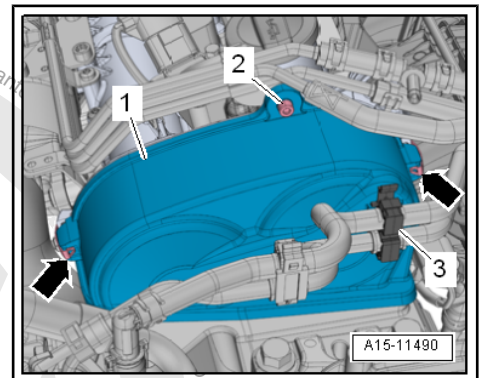
#### Note

*It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the belt is a repair procedure.*

## 2.62.2 Toothed Belt Condition, Checking, 1.4L TSI Hybrid Engine

### Procedure

- Free up the hoses from bracket -3-.
- Remove the bolt -2-.
- Loosen the clamps -arrows-, and remove the upper toothed belt guard -1-.

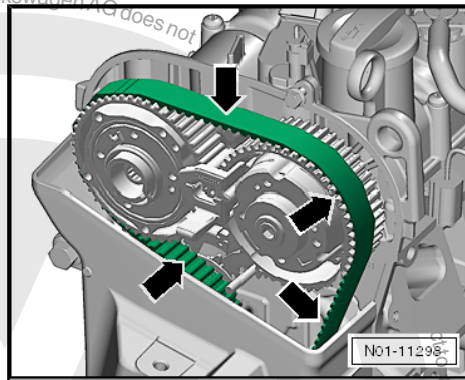






- Turn the crankshaft on the crankshaft belt pulley attaching bolt in the direction of the engine rotation and then check the toothed belt at the following points:

- ◆ Cranks, cross-sectional breaks, tears (on side of cover) -arrow-
- ◆ Lateral movement
- ◆ Fraying of cords
- ◆ Tears (in tooth base) -arrow-
- ◆ Separation (cover layer, belt cords)
- ◆ Surface cracks (plastic shroud)
- ◆ Oil or grease contamination



#### Note

*It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the belt is a repair procedure.*

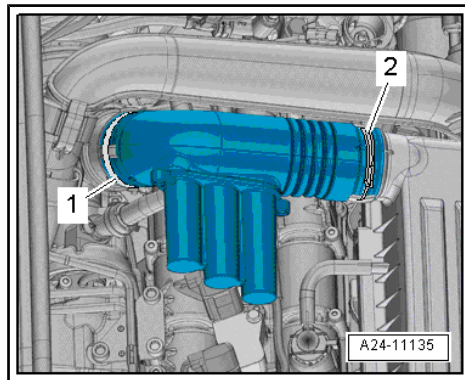
Assembly is done in the reverse order.

Tightening specification	Nm
Bolt for the toothed belt guard	8

## 2.63 Coolant Pump Toothed Belt, Checking

### Procedure

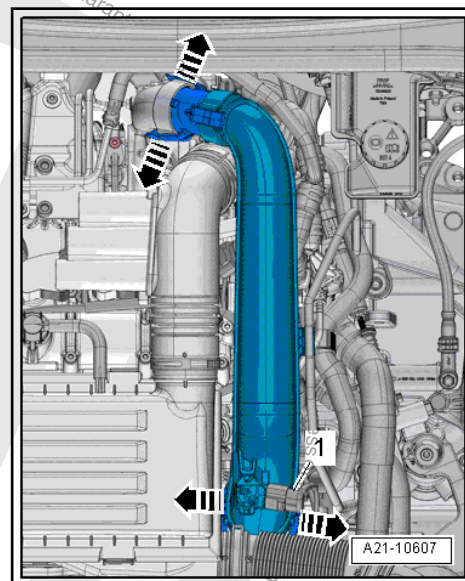
- Engine Cover, Removing and Installing, 1.4L TSI Hybrid Engines. Refer to [⇒ "2.31.1 Engine Cover, Removing and Installing, 1.4L TSI Hybrid Engines", page 112](#).
- Loosen the hose clamps -1- and -2- and remove the air guide pipe.
- Free up air guide hoses from the air guide pipe.



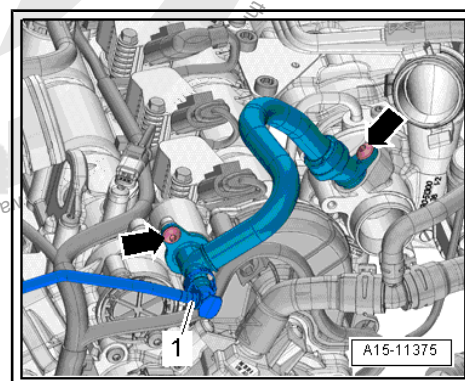




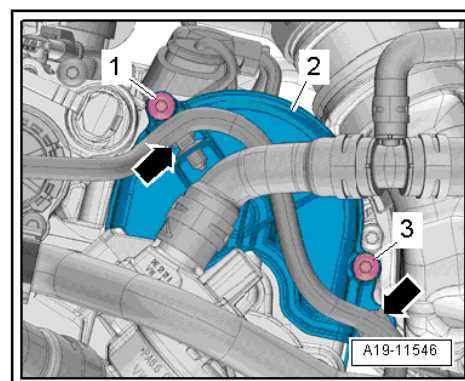
- Disconnect the connector -1-.
- Unlock the catches in the arrow direction and remove the air guide pipe.



- Unlock and remove the hose -1- to the EVAP canister.
- Remove the bolts -arrows- and remove the crankcase ventilation hose.



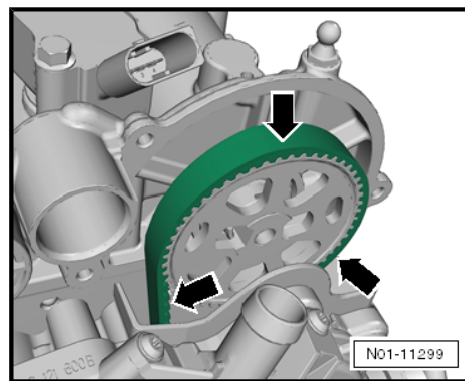
- Free up the wiring harness -arrows-.
- Remove bolts -1- and -3- and the toothed belt guard -2- for the coolant pump tooth belt.







- Turn the crankshaft on the ribbed belt pulley attaching bolt in the direction of the engine rotation and then check the toothed belt at the following points:
- ♦ Cranks, cross-sectional breaks, tears (on side of cover) -arrow-
- ♦ Lateral movement
- ♦ Fraying of cords
- ♦ Tears (in tooth base) -arrow-
- ♦ Separation (cover layer, belt cords)
- ♦ Surface cracks (plastic shroud)
- ♦ Oil or grease contamination



#### Note

*It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the belt is a repair procedure.*

Assembly is done in the reverse order.

Tightening specification	Nm
Bolt for the toothed belt guard	8
Bolt for the crankcase ventilation	9

## 2.64 Spark Plugs, Replacing

⇒ ["2.64.1 Spark Plugs, Replacing, 1.4L TSI Hybrid Engines", page 200](#)

⇒ ["2.64.2 Spark Plugs, Replacing, 2.0L TFSI Engine", page 203](#)

⇒ ["2.64.3 Spark Plugs, 2.0L FSI and 2.0L TSI, Removing and Installing", page 204](#)

⇒ ["2.64.4 Spark Plugs, Removing and Installing, 2.0L TFSI", page 207](#)

⇒ ["2.64.5 Spark Plugs, Replacing, 2.0L SRE Gasoline", page 210](#)

⇒ ["2.64.6 Spark Plugs, Replacing, 2.5L SRE Gasoline", page 212](#)

⇒ ["2.64.7 Spark Plugs, Replacing, 1.8L \(125 kW\) and 2.0L \(155 kW\) TSI Engine", page 214](#)

### 2.64.1 Spark Plugs, Replacing, 1.4L TSI Hybrid Engines

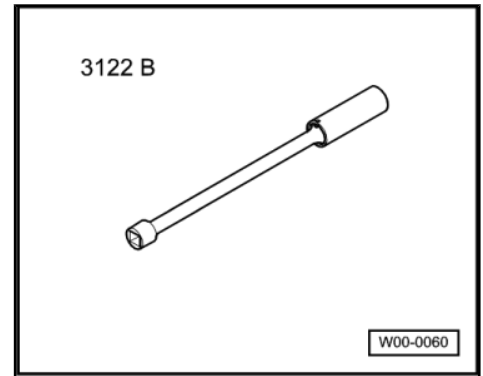
Special tools and workshop equipment required







◆ Spark Plug Removal Tool - 3122 B-



**WARNING**

*Hybrid vehicles have a high voltage system with very high voltage. Danger of electrical shock! Check for high voltage components in the area where you will be working before starting. Follow the General Warnings. Refer to ➤ Hybrid Electric System; Rep. Gr. 93 ; General Information.*



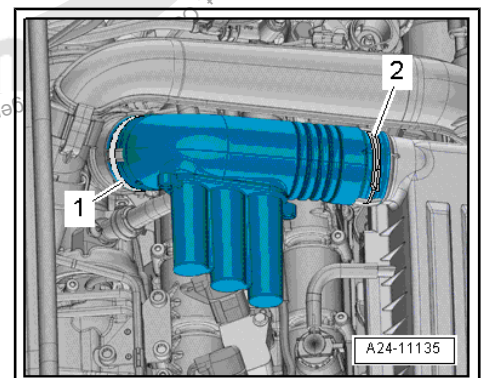
**WARNING**

- ◆ *All work on vehicles with a high voltage system may be performed only by technicians "certified on electrical systems".*
- ◆ *Be careful not to damage the high voltage cable with any tools being used.*
- ◆ *Contact to the responsible high voltage technician is something needs clarification.*

- Remove the upper engine cover. Refer to ➤ ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).
- Check for high voltage components in the area where you will be working before starting. Refer to ➤ ["2.21 Hybrid Components, Checking for Damage to High Voltage Components and Cables", page 90](#).

**Removing**

- Loosen the hose clamps -1- and -2- and remove the air guide pipe.





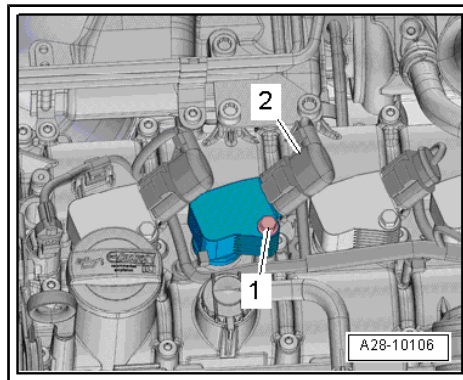


- Disconnect the connector -2-.
  - Remove bolt -1-, and remove the corresponding ignition coils.
- Repeat the procedure for all ignition coils.



#### Note

- ◆ *Note the installed position of ignition coils with power output stages.*
  - ◆ *Be careful to not kink or damage the wiring.*
- Remove Spark Plugs - Q- with Spark Plug Removal Tool - VAS 3122B- .



#### Installing



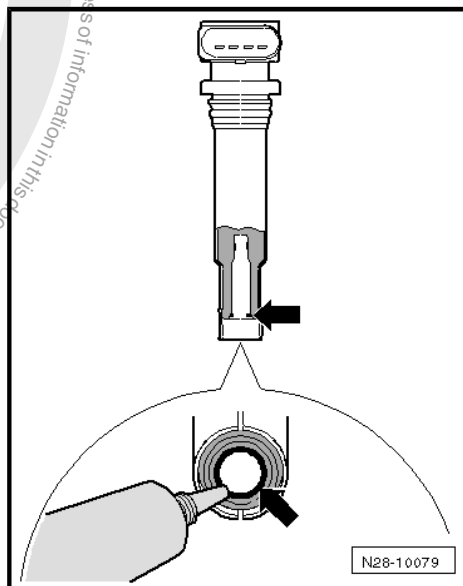
#### Note

- ◆ *Spark Plugs and tightening specification. Refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 28 ; Specifications*
  - ◆ *Follow all disposal regulations.*
- Install new Spark Plugs - Q- using Spark Plug Wrench - VAS 3122B- .



#### Note

- ◆ *Lubricate the ignition coils with Spark Plug Grease - G 052 141 A2- whenever installing new Spark Plugs - Q- .*
  - ◆ *New ignition coils are delivered already lubricated. It is not necessary to lubricate them again.*
- Apply a thin bead of Spark Plug Grease - G 052 141 A2- all around the sealing hose on the ignition coil -arrow-. The bead must be 1 to 2 mm thick.
  - Align all the ignition coils in sequence and insert them loosely into the spark plug shaft.
  - Press the ignition coils evenly onto the Spark Plugs - Q- by hand. Do not hit them.



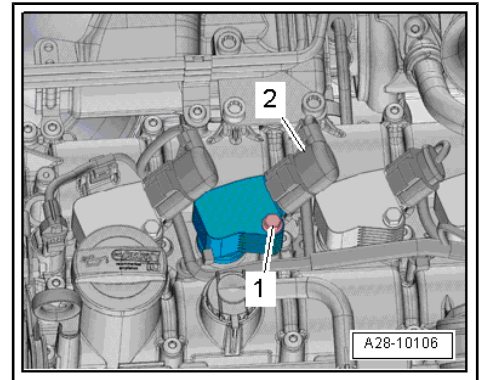




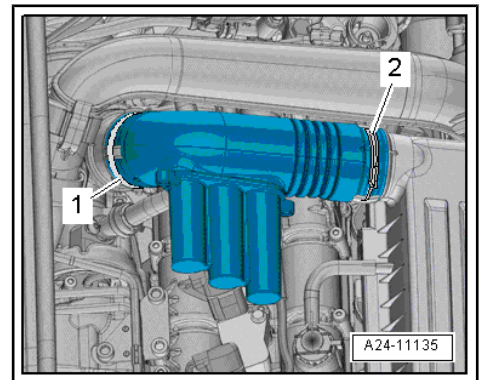
- Tighten the bolt -1- on the ignition coils to the tightening specification.
- Connect the connector -2-.

Repeat the procedure for all ignition coils.

- Install the air guide pipe.



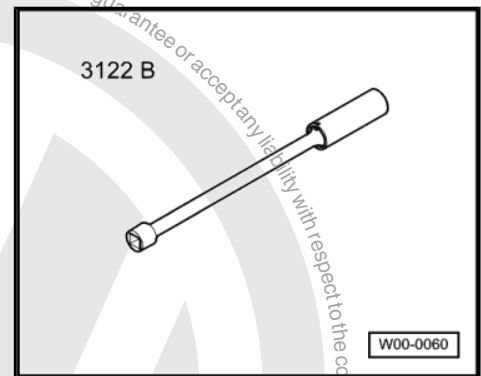
- Install the hose clamps -1- and -2-.
- Check the high voltage components in the area where you were working after finishing. Refer to [⇒ "2.21 Hybrid Components, Checking for Damage to High Voltage Components and Cables", page 90](#).
- Install the upper engine cover. Refer to [⇒ "2.31 Upper Engine Cover, Removing and Installing", page 112](#).



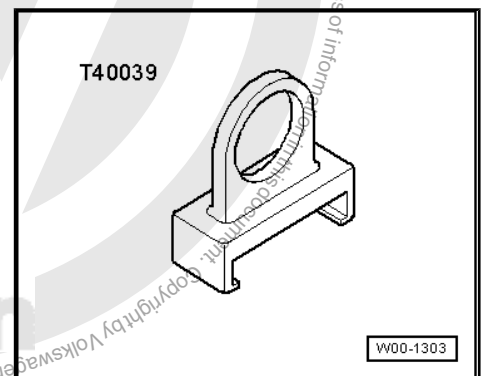
## 2.64.2 Spark Plugs, Replacing, 2.0L TFSI Engine

### Special tools and workshop equipment required

- ◆ Spark Plug Removal Tool - 3122 B



- ◆ Elbow Assembly Tool - T10118-
- ◆ Puller - Ignition Coil - T40039- for 2.0L TSI



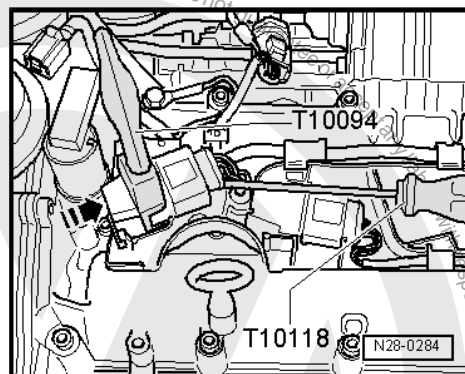




- Remove the engine cover. Refer to  
⇒ [“2.31 Upper Engine Cover, Removing and Installing”, page 112](#).

### Removing

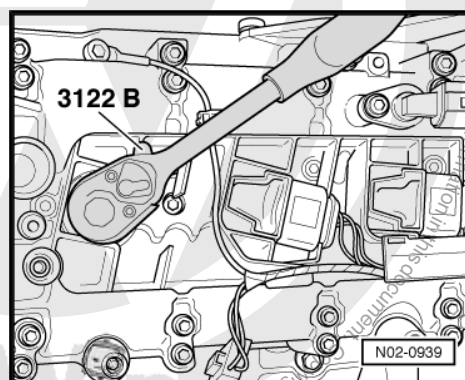
- Mount the Puller - Ignition Coil - T10094- on the ignition coil with power output stage -arrow-.
- Pull the ignition coil with power output stage out slightly.
- Mount the Elbow Assembly Tool - T10118- as illustrated.
- Disconnect the connector.
- Slightly pull out the ignition coil with power output stage.



- Unscrew spark plug using the Spark Plug Removal Tool - 3122 B-.

### Installing

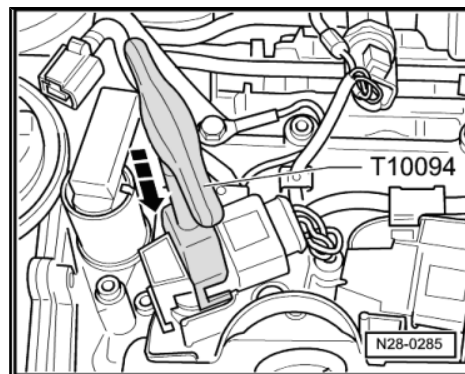
- Install new spark plugs using Spark Plug Removal Tool - 3122 B-.



### Note

- ♦ *Plug designation and torque specification. Refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 28; Specifications.*
- ♦ *Follow all disposal regulations.*

- Attach the Puller - Ignition Coil - T10094- to the ignition coil with power output stage.
- Push the connector onto the ignition coil with power output stage until it audibly engages.
- Push the ignition coil with power output stage into the cylinder head -arrow-.
- Install engine cover. Refer to  
⇒ [“2.31 Upper Engine Cover, Removing and Installing”, page 112](#).



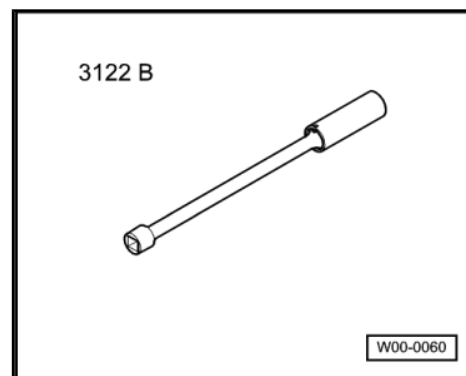
## 2.64.3 Spark Plugs, 2.0L FSI and 2.0L TSI, Removing and Installing

Special tools and workshop equipment required

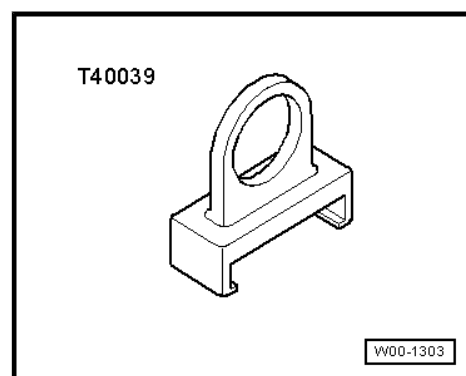




◆ Spark Plug Removal Tool - 3122 B-



◆ Puller - Ignition Coil - T40039- for 2.0L TSI



## Removing



### Note

- ◆ To pull off spark plugs, place Puller - Ignition Coil - T40039- on topmost thick rib -arrow- of ignition coils with power output stages.
- ◆ If lower ribs are used, these can be damaged

- Remove the engine cover. Refer to ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).

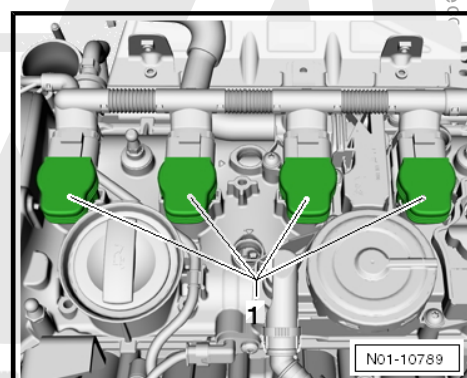
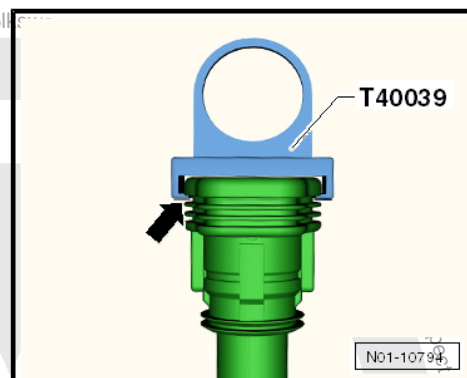
Spark plugs are located under ignition coils with power output stages -1-.

- It may be necessary to loosen the wiring guide from the cylinder head cover.



### Note

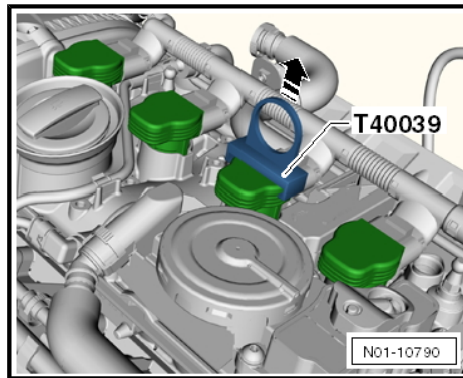
*Note installation position of ignition coils with power output stages!*



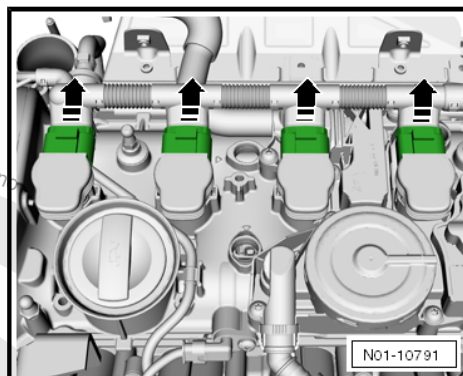




- Pull all of the ignition coils approximately 30 mm out of cylinder head in the direction of the arrow using the Puller - Ignition Coil - T40039- .



- Push connector in direction of ignition coils with power output stages, press catch down by hand and disconnect connectors -arrows-.



- Remove spark plugs with Spark Plug Removal Tool - 3122 B- .



#### Note

- ♦ *Plug designation and tightening torque, refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 28 ; Specifications .*
- ♦ *Follow all disposal regulations.*

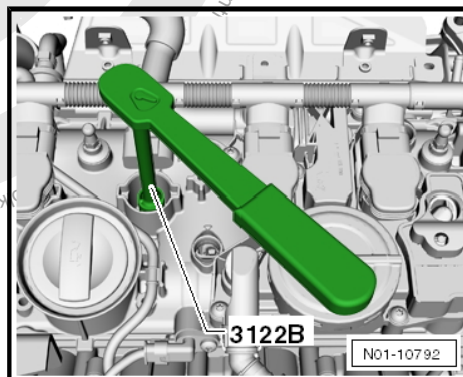
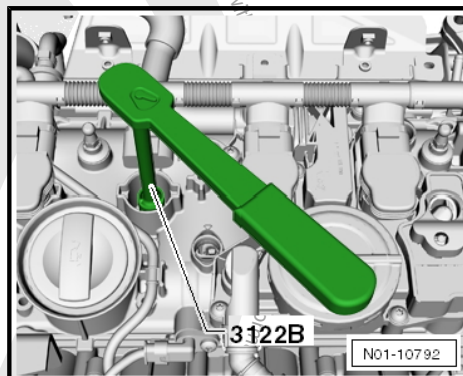
#### Installing

- Install new spark plugs using Spark Plug Removal Tool - 3122 B- .



#### Note

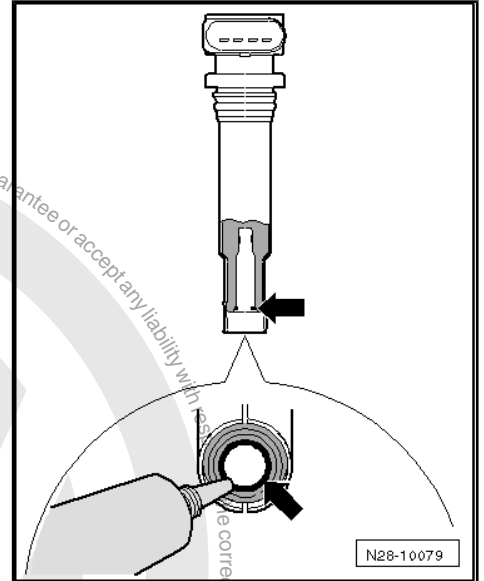
- ♦ *Lubricate the ignition coils with spark plug grease - G 052 141 A2- whenever installing new spark plugs.*
- ♦ *New ignition coils are delivered already lubricated. It is not necessary to lubricate them again.*



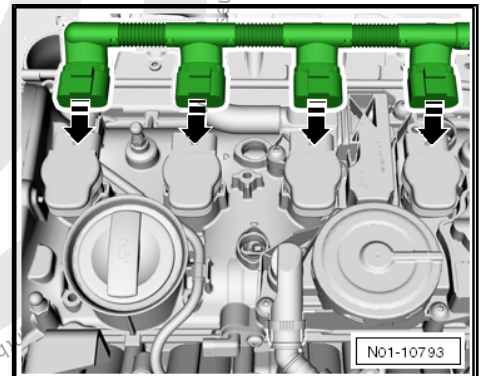




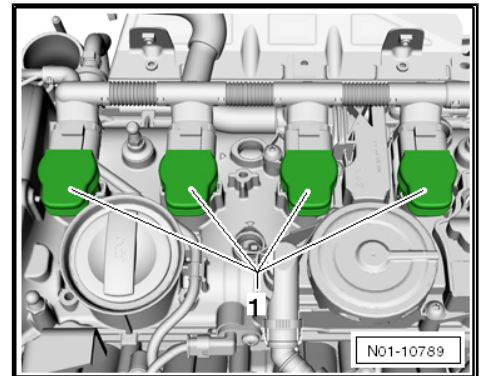
- Apply a thin bead of Spark Plug Grease - G 052 141 A2- all around the sealing hose on the ignition coil -arrow-. The bead must be 1 to 2 mm thick.



- Guide ignition coils with power output stages into cylinder head.
- Align ignition coils with power output stages into designated recesses of cylinder head cover.
- Connect all the connectors to the ignition coils -arrows-.



- Push the ignition coils with power output stage -1- all the way onto the spark plugs by hand. They must engage audibly.
- If necessary, attach the wiring guide to the cylinder head cover.
- Install engine cover. Refer to  
⇒ [“2.31 Upper Engine Cover, Removing and Installing”, page 112](#).



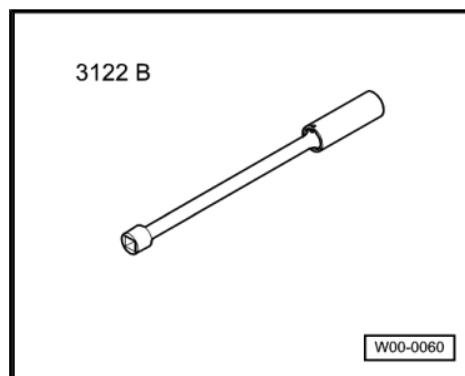
## 2.64.4 Spark Plugs, Removing and Installing, 2.0L TFSI

Special tools and workshop equipment required

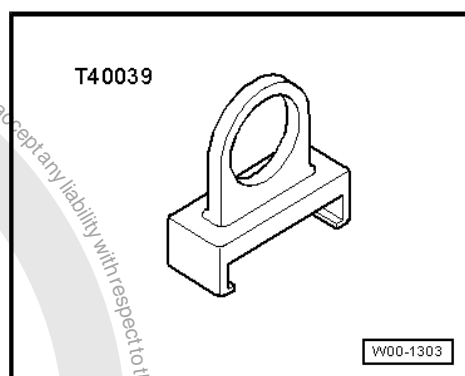




◆ Spark Plug Removal Tool - 3122 B-



◆ Puller - Ignition Coil - T40039- for 2.0L TSI

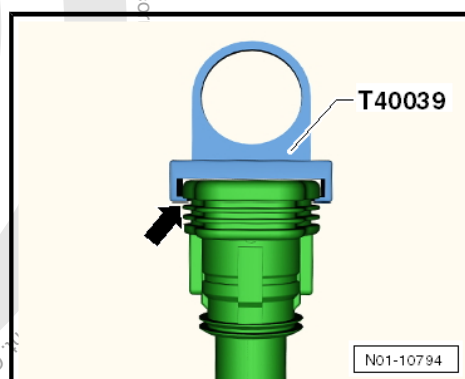


Removing



Note

- ◆ To pull off spark plugs, place Puller - Ignition Coil - T40039- on topmost thick rib -arrow- of ignition coils with power output stages.
- ◆ If lower ribs are used, these can be damaged
- Remove the engine covers. Refer to  
⇒ ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).



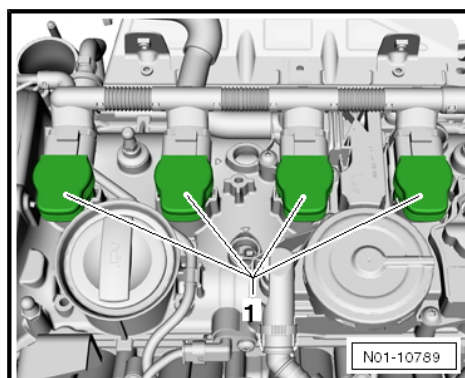
Spark plugs are located under ignition coils with power output stages -1-.

- It may be necessary to loosen the wiring guide from the cylinder head cover.



Note

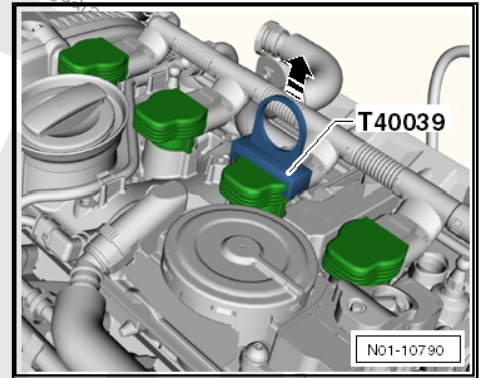
Note installation position of ignition coils with power output stages!



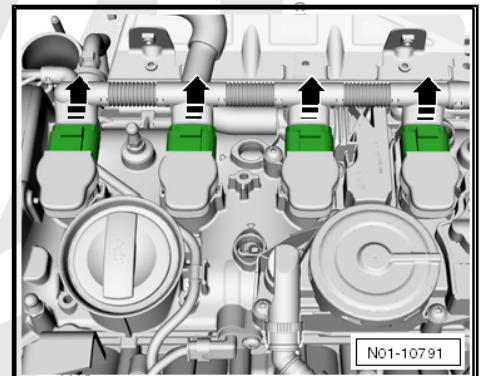




- Pull all of the ignition coils approximately 30 mm out of cylinder head in the direction of the arrow using the Puller - Ignition Coil - T40039- .



- Push connector in direction of ignition coils with power output stages, press catch down by hand and disconnect connectors -arrows-.



- Remove spark plugs with Spark Plug Removal Tool - 3122 B-



#### Note

- ◆ *Plug designation and tightening torque, refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 28 ; Specifications .*
- ◆ *Follow all disposal regulations.*

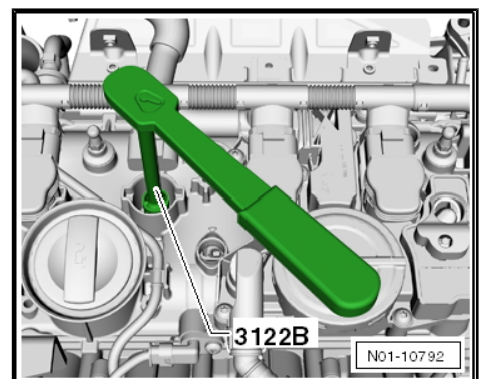
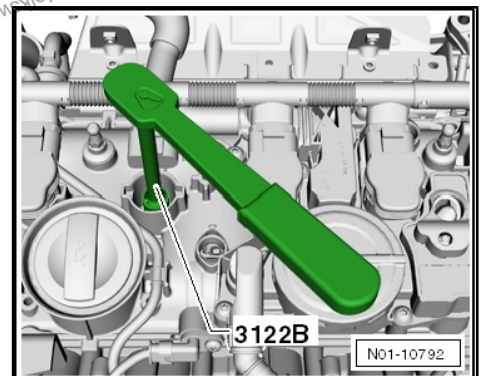
#### Installing

- Install new spark plugs using Spark Plug Removal Tool - 3122 B-



#### Note

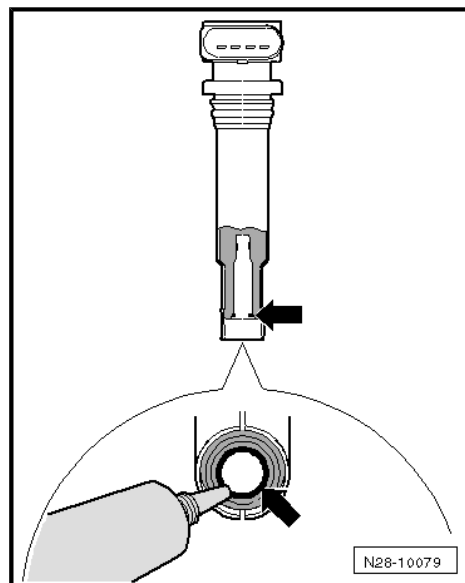
- ◆ *Lubricate the ignition coils with Spark Plug Grease - G 052 141 A2- whenever installing new spark plugs.*
- ◆ *New ignition coils are delivered already lubricated. It is not necessary to lubricate them again.*



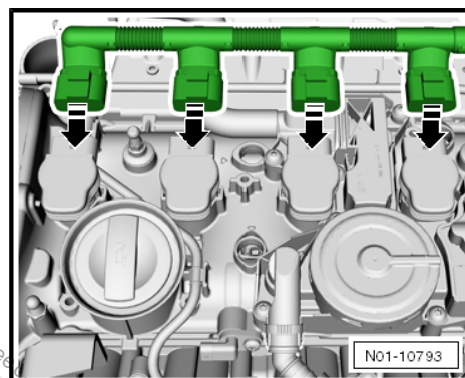




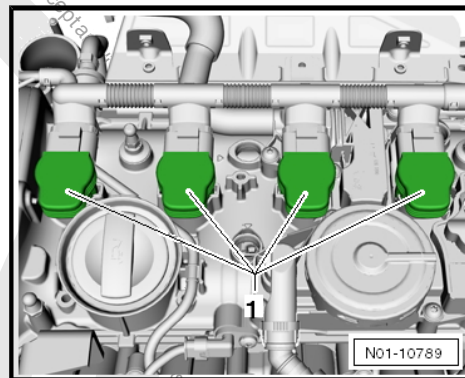
- Apply a thin bead of Spark Plug Grease - G 052 141 A2- all around the sealing hose on the ignition coil -arrow-. The bead must be 1 to 2 mm thick.



- Guide ignition coils with power output stages into cylinder head.
- Align ignition coils with power output stages into designated recesses of cylinder head cover.
- Connect all the connectors to the ignition coils -arrows-.



- Push the ignition coils with power output stage all the way onto the spark plugs by hand. They must engage audibly.
- If necessary, attach the wiring guide to the cylinder head cover.
- Install engine cover. Refer to  
⇒ [“2.31 Upper Engine Cover, Removing and Installing”, page 112](#).



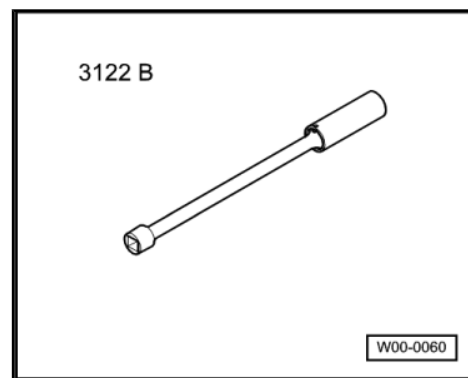
## 2.64.5 Spark Plugs, Replacing, 2.0L SRE Gasoline

Special tools and workshop equipment required





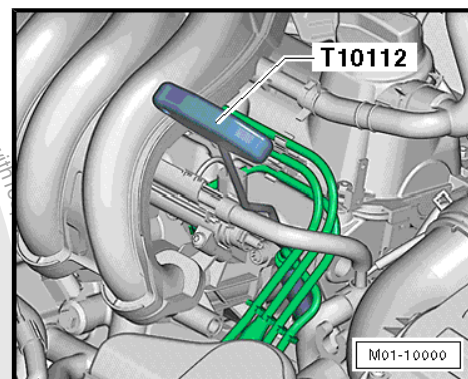
◆ Spark Plug Removal Tool - 3122 B-



◆ Puller - Spark Plug Connector - T10112-

**Removing**

- Remove connectors from fuel injectors at the first and fourth cylinders.
- Remove the spark plug connectors using the Puller - Spark Plug Connector - T10112- .



- Remove spark plugs with spark plug wrench - 3122 B- .

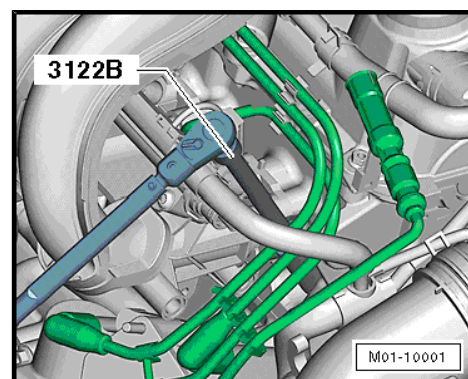
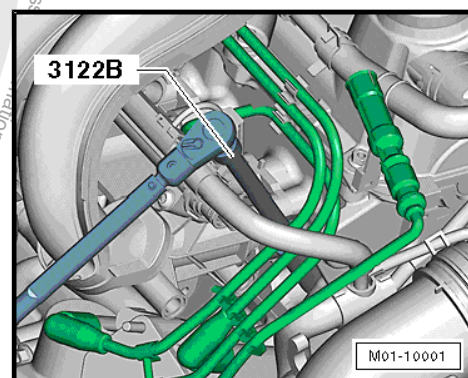


**Note**

- ◆ *Plug designation and tightening torque, refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 28 ; Specifications .*
- ◆ *Follow all disposal regulations.*

**Installing**

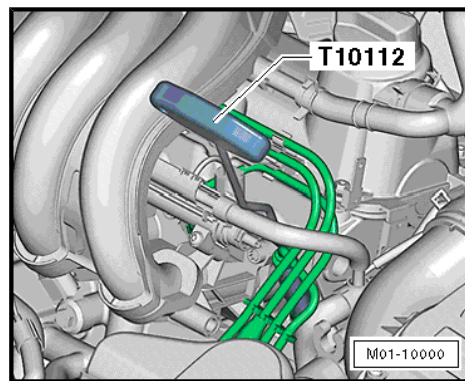
- Install new spark plugs using Spark Plug Removal Tool - 3122 B- .







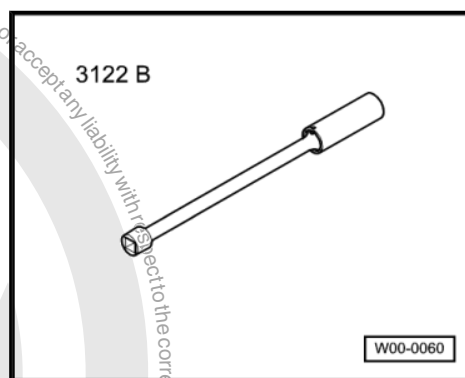
- Connect spark plug connectors using Puller - Spark Plug Connector - T10112- .
- Position fuel injection valve connector.
- Check fuel injector valves, spark plug wires and connectors for secure seating.



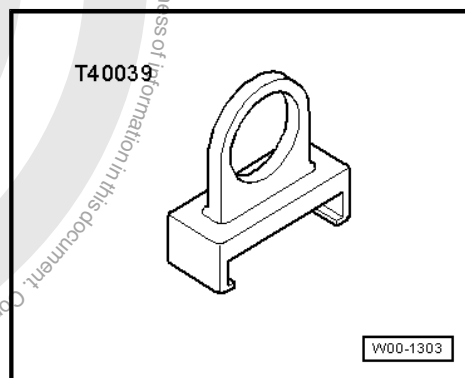
## 2.64.6 Spark Plugs, Replacing, 2.5L SRE Gasoline

### Special tools and workshop equipment required

- ◆ Spark Plug Removal Tool - 3122 B-



- ◆ Puller - Ignition Coil - T40039- for 2.0L TSI



- ◆ Elbow Assembly Tool - T10118-





## Removing



### Note

- ◆ To pull off spark plugs, place Puller - Ignition Coil - T40039- on topmost thick rib -arrow- of ignition coils with power output stages.
- ◆ If lower ribs are used, these can be damaged
- Remove the engine cover. Refer to  
⇒ ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).

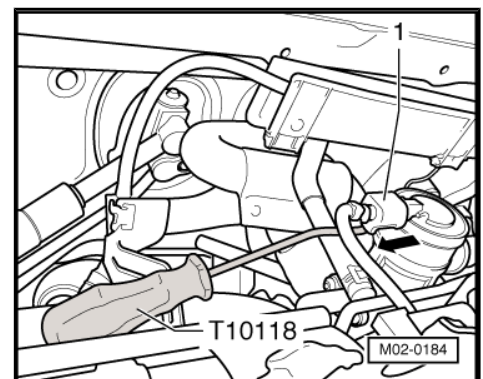
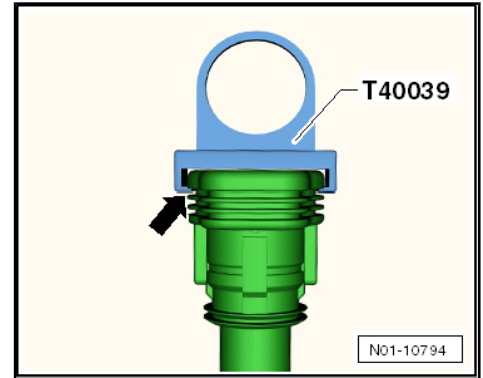
Spark plugs are located under ignition coils with power output stages.

- Remove the connector -1- with the Elbow Assembly Tool - T10118- in direction of arrow.



### Note

*It is necessary to pull off the connector so that afterwards the ignition coils with power output stages with connected wires can be set aside without disturbing the routing of the wiring!*

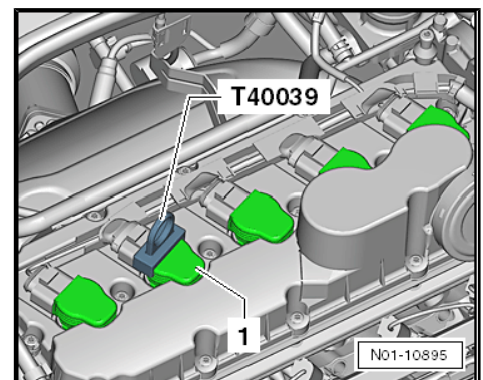


- Remove all the ignition coils with power output stage -1- using the Puller - Ignition Coil - T40039- .



### Note

- ◆ When pulling out ignition coils with power output stages, the wiring and connectors for ignition coils can remain connected.
- ◆ Note installation position of ignition coils with power output stages!
- Carefully move the ignition coil with power output stage, with the wires still connected, to the side.



### Caution

**Be careful to not kink or damage the wiring.**





- Remove spark plugs with Spark Plug Removal Tool - 3122 B- .

#### Installing



#### Note

*When replacing spark plugs, coat the pencil coils (ignition coil with power output stage) with G 052 141 A2. This will prevent the rubber hose from burning to the ceramic.*

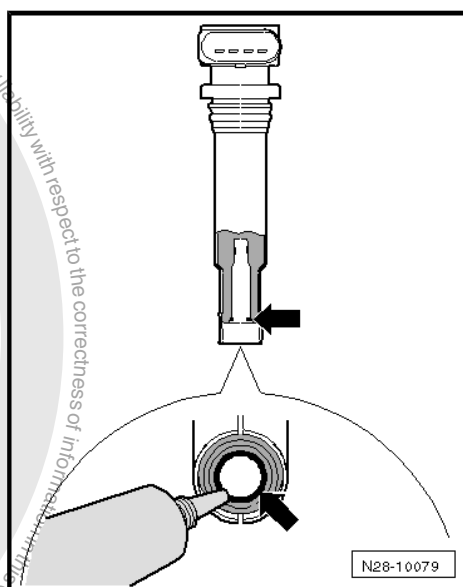
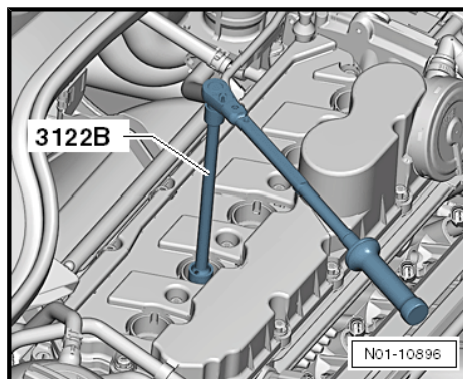
- Screw in new spark plugs using Spark Plug Removal Tool - 3122 B- and tighten to 20 Nm.
- Apply a thin bead of Spark Plug Grease - G 052 141 A2- all around the sealing hose on the ignition coil -arrow-. The bead must be 1 to 2 mm thick.
- Install the ignition coils with power output stage into the cylinder head and then align them with the openings in the cylinder head cover.
- Press the ignition coils with power output stage all the way onto the spark plugs until they audibly engage.



#### Note

*Make sure that the wire routing of the ignition coils with power output stages is correct.*

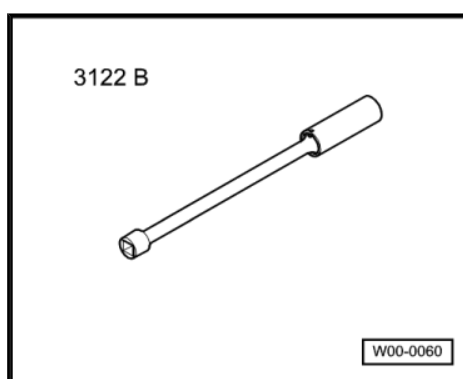
- Install engine cover. Refer to ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).



## 2.64.7 Spark Plugs, Replacing, 1.8L (125 kW) and 2.0L (155 kW) TSI Engine

### Special tools and workshop equipment required

- ◆ Spark Plug Removal Tool - 3122 B-



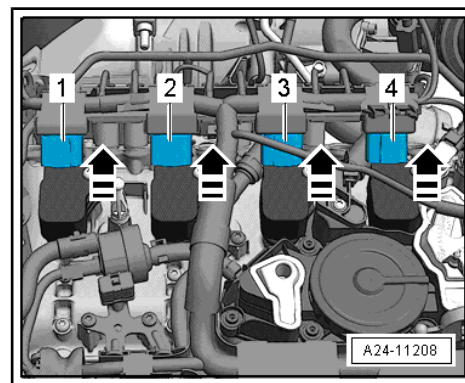
#### Removing

- Remove the "upper" engine cover. Refer to ["2.31 Upper Engine Cover, Removing and Installing", page 112](#).





- Disengage the connectors -1- through -4- and at the same time remove all of the plugs from the ignition coils with the power output stage in direction of the arrow.



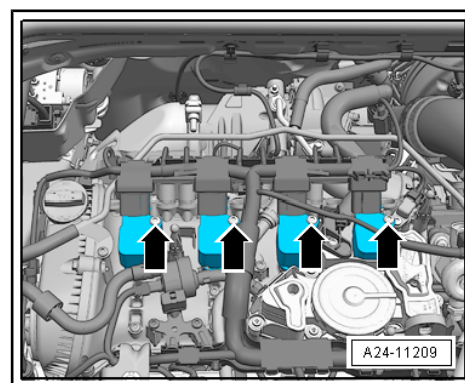
- Remove the ignition coils with the power output stage bolts -arrows-.
- Remove the ignition coils with the power output stage upward.



#### Note

- ◆ Note the installed position of ignition coils with power output stages.
- ◆ Be careful to not kink or damage the wiring.

- Remove spark plugs with Spark Plug Removal Tool - 3122 B- .



#### Installing

- Use the Spark Plug Removal Tool - 3122 B- to tighten the new ignition coils to specification ➔ [page 215](#) .

Align all ignition coils with the power output stage one after the other and insert them loosely into the spark plug shaft.

- Press the ignition coil with power output stage evenly by hand onto spark plugs (do not use a hammer).
- Tighten the ignition coil with power output stage bolts to the tightening specification ➔ [page 215](#) .
- Connect the connector at the same time.
- Install the “upper” engine cover. Refer to ➔ [“2.31 Upper Engine Cover, Removing and Installing”, page 112](#) .

Tightening specification	Nm
Spark plugs in cylinder head	30
Ignition coil with power output stage bolts.	10

## 2.65 DTC Memories, Checking with Vehicle Diagnostic Tester and Correcting Faults According to Repair Procedure

### Procedure

- Connect the Vehicle Diagnostic Tester . Refer to ➔ [“1.6 Vehicle Diagnostic Tester, Connecting”, page 15](#) .
- Select “OBD”.
- Select system “OBD”.
- Read the “Gateway device”.





- Correct any faults according to the repair procedure.



#### Caution



*In every case, the vehicle must be released to the customer with the DTC memory erased.*

### Static Malfunctions

If one or more static malfunctions exist in the DTC memory, we recommend in agreement with the customer, that these malfunctions be resolved with the help of Guided Fault Finding.

### Sporadic Malfunctions

In the case that only sporadic malfunctions or notes are stored in DTC memory and the customer has no complaints in conjunction with an electronic vehicle system, erase the DTC memory.

- Press the “continue”  button again to access the test plan.
- End Guided Fault Finding: first use the  button and then End

All DTC memories will be checked now once more.

The window that now appears confirms that all sporadic faults were cleared. The diagnostic protocol will be sent automatically “online”.

Vehicle system test is completed.







### 3 Revision History

Re- vi- sion	Date	Job Type	Feedback #	Notes	Editor
1	05/29/2014	Local Update	N/A	Removed - highest customer satisfaction- note from Oil Level Checking.	Tom Perry





# Cautions & Warnings

**Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.**

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Volkswagen retailer or other qualified shop. We especially urge you to consult an authorized Volkswagen retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Volkswagen.
- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.
- Volkswagen is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Volkswagen retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the VAG 1551 Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.
- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations in this manual - replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.



# Cautions & Warnings

- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly; do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.
- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Volkswagen Service technicians should test, disassemble or service the airbag system.



## Cautions & Warnings

- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Volkswagen Service technicians using the VAG 1551 Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

**I have read and I understand these Cautions and Warnings.**

